

AMERICAN ARCHITECTURE: WITH ESPECIAL REFERENCE TO WORK
AT WASHINGTON.

By FRANCIS S. SWALES.

Read before the Royal Institute of British Architects, Monday, 15th March 1909.

WHEN I was asked to give a Paper upon American architecture before this Institute I recognised that I owed this compliment to the fact that I was known to members of your Council as having lived for so many years in America that my point of view might be expected to be that of the American, and that in limiting the subject in order to make it possible to be dealt with in the hour placed at my disposal I might naturally confine my Paper to some subject in which I should believe American architects themselves to be especially interested. I knew, too, that it is characteristic of British generosity to expect to have to take into account the natural shortcomings of the foreign point of view, and to be rather indulgent with it—I think the foreigner rather expects the indulgence—and I ventured to think I might interest you in a brief study of architecture as it was, as it has been, as it is, and as it will be in the United States, having especial reference to work at the national capital—Washington, in the district of Columbia.

To assist in a better comprehension of how the capital city came to be located as it is, how a new city came to be founded, and more particularly how to account for the making of a great city plan which in its conception was wholly foreign to English traditions, in a country that was made out of a number of English colonies, leads first to the consideration of certain indispensable facts taking place antecedent to the founding of that city.

As to the high general character of the architecture of the early period of the Republic's existence, its subsequent decline, its more recent remarkable ascendancy, and its present lofty standards, all have their explanations and justifications and causes, and have arisen out of the certain special conditions of political circumstances connected with the nation's formation and growth, and the inevitable influences of geographical position and climate.

Architecture is said to be the mirror of a people's needs, aspirations, and enlightenment; and surely nowhere could the truth of this statement be more completely verified than by a comparison of the written history of Washington with its architecture, and I think this will be sufficiently demonstrated not only by reference to the individual monuments, but equally, if not more especially, by referring to the plan of the city itself.

The British possessions which seceded from England and came under the Federal Government constituted about one-third of the area of the present United States, and lay along the Atlantic seaboard. Quebec to the North and the Louisiana territory to the West were, one a former colony and the other still a colony of France, and Florida to the South was the property of Spain. During the War of Independence the French colonists lent their moral and material support to the American revolutionists, and France herself became their ally, and her subjects contributed much of the military skill and engineering that came to the assistance of Washington. Among these, one of the first to tender his services was Major Pierre Charles L'Enfant, who soon distinguished himself for conspicuous ability as a military engineer.

When peace and independence became established, the first thing to be considered was a form of government. When the Federal form had been adopted, and General Washington was made President and Thomas Jefferson—the author of the Declaration of Independence—the first Secretary of State, one of the first things to be discussed was the proposition to establish a “Federal town, a Federal house for Congress and for the executive officers.” The discussion as to where it should be located was long and heated, and strong sectional feeling became apparent. Philadelphia, New York, Baltimore, and other large towns urged their claims to be made the seat of the National Government. Maryland and Virginia offered the present territory on the Potomac on the 38° north latitude. Balloting gave no results; but, finally, an Act was passed conferring upon President Washington the sole power to select a Federal territory “not exceeding ten miles square on the river Potomac . . . for the permanent seat of the Government of the United States.”

The final adoption of the Potomac site was brought about by an interesting stroke of diplomacy. The Potomac site was ardently favoured by the representatives of the Southern States and also by the President, but was bitterly opposed by those of the Northern States. It happened at this time that Congress had just defeated, after an obstinate struggle, a measure proposed by Alexander Hamilton known as the Funding Bill. The Funding Bill provided for the assumption by the Federal Government of the war debt of the States. The debts amounted to some four millions of pounds sterling. Hamilton, who was earnestly seeking to have this important Bill reconsidered, appealed to the Secretary of State for aid, as he believed that the Northern States, which were the creditor States, would secede from the Union if their claims were not paid. Jefferson, to quote his own words, recorded by himself in his *Annals*, “thought it impossible that reasonable men consulting together coolly could fail, by some mutual sacrifices of opinion, to form a compromise to save the Union.” The “compromise” turned out to be an arrangement that the “rejection should be rescinded, to effect which some members should change their votes. But it was observed that this pill would be peculiarly bitter to the Southern States, and that some concomitant measure should be adopted to sweeten it a little to them. There had been before propositions to fix the seat of Government either at Philadelphia or at Georgetown on the Potomac, and it was thought that by giving it to Philadelphia for ten years and to Georgetown permanently afterwards this might act as an anodyne, and calm in some measure the excitement which might be caused by the other measure alone. So two of the Potomac members agreed to change their votes, and Hamilton undertook to carry the other point. In doing this the influence he had established over the Eastern members effected his side of the engagement, and so the Assumption was passed.” This record is important, for it shows that it was Jefferson who contrived to place in the hands of the President the selection of the site and control of the plan of the capital city.

Jefferson, upon whom devolved the difficult task of arranging the diplomatic relations of the United States with foreign nations, like many another gentleman of his day, had

many callings, and seems to have been a planter, to have practised law without much pecuniary success, to have studied astronomy, gathered about him a library of great intrinsic value—in fact the nucleus of the collection in the Congressional Library—and, what is most important to his connection with the establishing of the national capital, he was by inclination and aptitude one of us—he was an architect ; and after he retired from office at the expiration of his term as President of the United States, to which he was subsequently elected, he designed, among other things, the fine group of buildings for the University of Virginia and his own house, Monticello. He knew it was Washington's desire that the capital should be located near his (Washington's) home in Virginia, and he stipulated for that in his "compromise" with Hamilton ; but I think it was due to his technical knowledge of building that he realised that Washington's experience as an engineer and surveyor rendered him the fittest person to deal with the selection of professional advice and assistance in the laying out of the town and determining of the sites for the most important buildings.

The Act of July 1790, which gave the President the power to select the site for the future seat of Government, authorised him to have it surveyed and planned, and to proceed with the construction of certain works and buildings. He therefore appointed three Commissioners to supervise the work and stand the criticism of the public—Major Ellicott to survey the territory, and Major L'Enfant to plan the city. To the last-mentioned he indicated that he thought the Federal House should be located in the centre of the town, and that the Executive mansion and offices should be kept well away from the Federal House "to prevent members of Congress from too frequently visiting the Executive departments." To Jefferson he delegated everything and kept him informed of his personal wishes—possibly he had conveyed the desire "to prevent members of Congress" from interfering with the building of Washington, and that idea may have been uppermost in Jefferson's mind when in the "compromise" made with Hamilton he magnanimously proposed that Philadelphia should be the capital for the "first ten years." The versatile Secretary of State visited Europe arranging diplomatic relations and collecting books, plans of buildings, and maps of cities. The last he supplied to Major L'Enfant, and it may be—I think it probable, in view of the maps selected—namely, Paris, Orleans, Turin, Milan, Strasbourg, Carlsruhe, and Frankfort, and the fact that L'Enfant was an accomplished military engineer—that it was at L'Enfant's request that the maps were obtained, and he, L'Enfant, was probably familiar with them and knew something of their best features. It is probable, also, that he knew of the various works of Le Notre. However this may be, he evolved from his study of them a plan for the city of Washington that was at once original, practical, and beautiful, and to which the city will ultimately conform.

This plan [fig. 1] provided for a central site for the "Capitol"—which was L'Enfant's designation of the Federal house—on the plateau at the intersection of two main avenues running north and south and east and west, designated as North, South, East and West Capitol Streets. The Capitol was located in a large park from which radiated twelve wide avenues, including the four known as Capitol Streets, and two of each of the others (those extending in opposite directions) were named after the States of Pennsylvania, Maryland, New Jersey, and Delaware. Other streets were then laid out parallel with the Capitol Streets, those extending north and south being designated by numbers, and those east and west by the letters of the alphabet. The President's house was located, facing north and south, in a park at the intersection of Pennsylvania Avenue and West Sixteenth Street. At the intersection of the principal axes of the Capitol and of the President's house it was proposed by L'Enfant to place the equestrian statue of Washington voted by the Continental Congress of 1783 ; and from this point to the Capitol to develop the West Capitol Street into a magnificent avenue four hundred feet wide and a mile in length, along each side of which, and situated each in the centre of its own

grounds, were to be erected the "Grands Edifices." A "National Church," or kind of Pantheon for the reception of statues of heroes whom Congress might honour, was considered and mentioned in notes on early maps. The engraved map of 1792 shows sites for buildings, monuments, and statuary, all arranged so as to present focal points along the principal streets, and, as L'Enfant says, "to preserve through the whole a reciprocity of sight" between the

important points. Such was the plan approved by Washington and Jefferson and adopted by Congress in 1791, and which L'Enfant was entrusted to carry out.

L'Enfant's plans were, during his lifetime, carried out only so far as securing sites for the principal Government buildings, cutting down trees, and making a few of the principal roads. All available land was bought up by speculators, who held it at high prices and thus retarded the growth of the city.

The personal interest which we know Washington and Jefferson took in the planning of the city and in the selection of sites for the important public buildings extended also to the selection of designs for the buildings, and, with Jefferson, even to the choice of painters and sculptors to execute monuments.

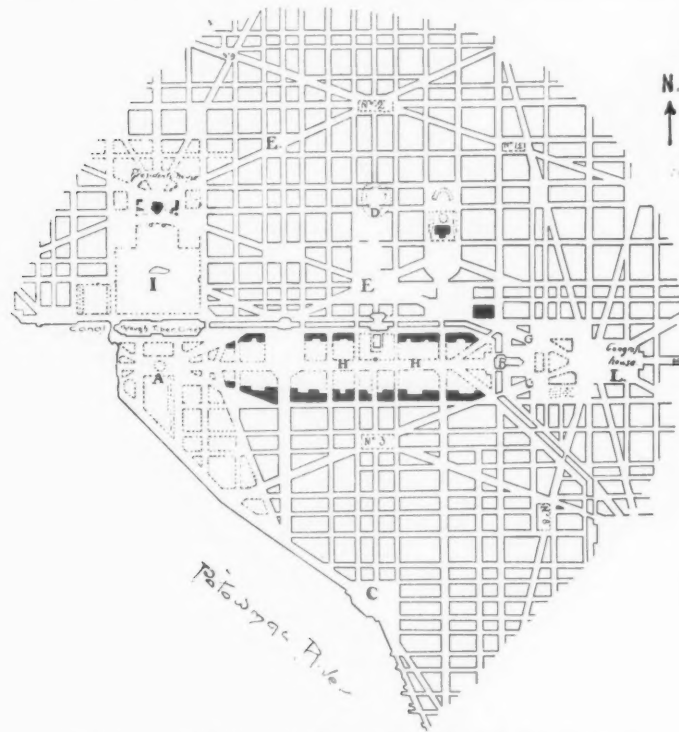


FIG. 1.—SECTION OF L'ENFANT'S MAP (1791), SHOWING SITES SELECTED FOR PRINCIPAL FEDERAL BUILDINGS.

A. Equestrian statue of George Washington, voted in 1783 by the Continental Congress. E. Grand fountains. G. Public walk and carriage-way to the Capitol. H. Grand Avenue, 400 feet wide, 1 mile long (West Capitol Street). I. President's Park. N. Cascade.

The three Commissioners referred to above who were appointed to look after the laying out of the capital city were directed to "procure suitable buildings for the accommodation of Congress and of the President, and for the public offices of the Government of the United States"; and, soon after the approval of L'Enfant's plan, they took up this important part of the work. In the year 1792 a competition was held to procure a design for the Capitol, and sixteen designs were submitted, but out of the lot none was regarded as being fit for serious consideration, and all were returned by Jefferson to their authors. Shortly afterwards a French architect, Stephen Hallet, of New York, presented a design to the Commissioners which met with general approval, and he was asked to journey to Washington to examine the site and perfect his design. About the same time Dr. Wm. Thornton, a Philadelphia physician and amateur architect, who had studied in Paris, presented an elaborate coloured design to President Washington, who was so impressed that he asked the Commissioners to adopt

Thornton's design in place of Hallet's. Hallet declared that Thornton had stolen some of his rough sketches and merely elaborated upon them. This charge Thornton vigorously denied, and the premium originally offered for a design was awarded to him. Thornton was not, however, considered to be competent to carry out the work, and Hallet was made supervising architect with a salary of £400 a year, and the work commenced after Hallet had shown that Thornton's plan was impracticable and had revised Thornton's design. Thornton got himself appointed as one of the Commissioners, and a bitter quarrel ensued between the doctor and the architect. The Commissioners—no doubt at Thornton's instigation—requested Hallet to turn over all his drawings to them, which he flatly refused to do—and I think we all sympathise with his stand! He was therefore dismissed. George Hadfield, an Englishman, succeeded Hallet, but he too was badly treated by the Commission and was forced to resign.

A competition was also held for the President's house, and this was won and carried through by James Hoban, an Irishman, who had been a clerk of works under Hallet. The President's house is an unpretentious though large and rather monumental residence, belonging to the early type of the Classic Revival in England.

Leaving Washington for a moment, there is another public building which owes its American character—a character too much influenced by French design to be English, yet too English to be entirely won over to wholly French design—to the fact that, like the Capitol, it is the work of both French and English—or Irish—architects: the New York City Hall, built between the years 1803 and 1812, from designs by Mangin and McComb.

In 1803 Jefferson, who was then President, accomplished the very important purchase by the United States from France of the Louisiana Territory, adding many thousand square miles of fine land and a considerable number of French people to the national population.

To return now to the Capitol, after the dismissal of Hadfield, Hoban, the architect of the President's house, was next called in to continue the work. He completed the north wing of the Hallet-Thornton design, which is now part of the central block, in the year 1800. Three years later Benjamin Latrobe—a pupil of Cockerell—an Englishman who had cultivated the acquaintance of President Washington, was appointed to construct the south wing and reconstruct the work upon the north wing which had been poorly executed under Hoban. He did both in accordance with his own plans, which did not differ materially from those of Hallet, Thornton, and Hadfield. He completed both wings in 1811, and built a kind of gantry between them.

The following year the United States declared war against England, and in August of 1814 the British troops took the city of Washington and burned the Capitol, the President's house, and other public buildings, besides much private property. The walls of the Capitol and of the President's house withstood the flames. Latrobe, who was at the time in Pittsburg, was summoned by President Madison to return to Washington, and he proceeded with the restoration of the Capitol. To him is due the credit of designing the former House of Representatives—now known as Statuary Hall—and the old Senate Chamber, used at present by the Supreme Court of the United States, and the old lobbies. He designed a low dome and the central portion of the east front, consisting of the colonnade and the pediment. He resigned in 1817, and was succeeded by Charles Bulfinch, of Boston, who was the first American-born architect employed on the Capitol. Bulfinch designed the hall of the old Library of Congress, which formed the projecting central feature of the west front, modified Latrobe's design for the dome, and designed the west front very much like the front of the Boston State House, of which he was also architect, and in 1827 reported that the Capitol was finished. The building completed by Bulfinch was, with the exception of the dome, what to-day constitutes the central block. It is 352 feet long by 121 feet

deep, 70 feet high to the top of the balustrade, and to the top of the dome measures 145 feet.

Latrobe's work was that of an architect of some—but by no means complete—training, and he introduced numerous trifling details and degenerate forms into his work on the Capitol, as, for instance, the segmental ceiling over the old House of Representatives. He and Jefferson, who was then living in retirement and practising architecture, had much to do with the development of the so-called Classic Revival in America—the introduction of the use of Greek and Roman temples for buildings for all purposes. Presidents Madison and Monroe recognised that the earlier Presidents had spared neither time nor thought upon the study of the Capitol, and were opposed to any changes which would not be simply the logical development and extension of the original design. Latrobe and Bulfinch were both tied by restrictions in this respect. The construction of the Rotunda and Library indicate the growth of the wealth of the nation at that time; and the building of large groups of new colleges—the University of Virginia, Washington and Lee University, and Girard College, prove that the desire for higher education had taken hold upon the people during this period of prosperity. (There already existed several colleges and universities of note, including William and Mary, Harvard and Yale.) When Bulfinch handed in his report that the Capitol was finished he retired to Boston, and Robert Mills, designer of the old Pennsylvania State Capitol, succeeded him as a sort of resident architect or clerk of works, but for twenty years nothing further was done to the Capitol.

Immigration went on rapidly, the population of the country doubling and quadrupling during this time. The class of immigrants being principally farmers, mechanics, traders, and soldiers of fortune—strong, vigorous, and determined men, rather than subtle, refined, or politic. The suffrage was too easily obtained, and the votes of this horde of Europeans began to tell upon the class of men who attained the Presidency. The growth of material interests is evidenced by the building of the Treasury Department in Washington, the Customs House at Boston, the old National City Bank in New York, and similar structures at Philadelphia, Providence, Richmond, Rochester, Pittsburg, New Orleans, St. Louis, and other large towns.

In 1833 the old building of the Treasury was destroyed by fire. Mills was appointed to design a new one. It was intended to locate this department in what is now called the Mall—the park which in L'Enfant's scheme was to be traversed by West Capitol Street and made into a grand avenue—but Mills took so long deciding upon the site that President Jackson, a soldier by profession, lost patience with him, and, it is said, meeting the architect just outside the President's house one morning he planted his cane at the spot where he was standing, and said, "Here, right here, is where I want the corner-stone laid." And there it was laid. The building as erected breaks Pennsylvania Avenue and obstructs the view from the President's house to the Capitol. The adoption of this site was a serious blunder, and a frightful blot on L'Enfant's plan. The original portion was big, costly, and commonplace. To Jackson we must attribute the beginning of the appointment of Army engineers to construct Government buildings. Perhaps he felt that as Washington and Jefferson had appointed engineers and architects—men of their own professions—he should follow their precedent by appointing others from his. On the other hand his action was partially justified by the dearth of good architects. The commercial undertakings everywhere called loudly for the help of all the brains in the country; there were doubtless plenty of opportunities for architects who could have shown themselves competent to grapple with the problems of the times, but if a design for a church was required a Greek Ionic temple was presented, if a railway station a Greek Doric temple was considered the thing—by the so

denominated architects—and not only the President, but the railway companies and business firms placed their buildings in the hands of men who, if they knew little of engineering, had at least the advantage of knowing nothing about the works of Stuart and Revett or “Greek” Thomson.

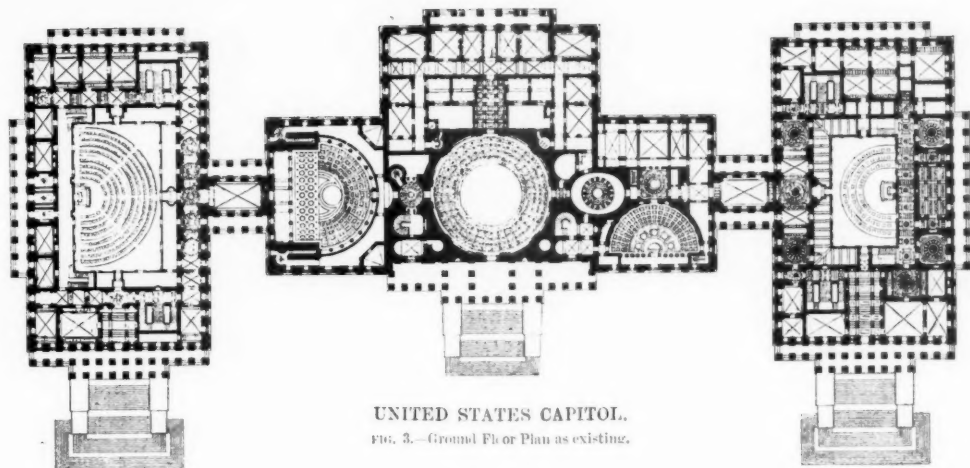
In 1850, when the enormous increase in population, and consequent increase in representation in Congress, made important extensions to the Capitol necessary, Thomas U. Walter, of Philadelphia, was practically the only architect left who could be entrusted with this great task. Walter was a Classicist, but used the orders with intelligence, refinement, and effect. He was also an able, practical planner, and withal an artist competent to compose both as to plan and perspective. Between the year 1850 and towards the end of the Civil War he planned and carried out the extensions and dome of the Capitol as it exists at present [fig. 2]. He treated the scheme boldly and simply, leaving the plan of the centre block as he found it, and adding two great wings, making a three-part composition. The longer axis of the old building runs north and south; the axis of Walter's two wings were made to run east and west, and the resulting masses in pleasing contrast to that of the old central structure.

Walter began his design and carried it through to completion during the saddest period of American history—at the time when bitter controversy had arisen between the States of the North and South over the question of the extension of the slave-holding territory. Angry debate, and even assault and battery, became of common occurrence in Congress. Let us digress for a moment to recall that when Jefferson and Hamilton made their little “compromise” the latter expressed his fears that the Eastern Northern States might secede from the Union if their claims were not paid. Their right to do so was not, apparently, questioned, and when the deadlock came over the question of slavery the Southern States naturally assumed the same right. Good Americans on both sides desired the preservation of the Union, and believed it would not be destroyed but rather strengthened by the struggle which was at hand; the importation of slaves had been forbidden many years previously, and the differences arose only as to whether slavery should be extended into the new States being formed out of the Louisiana territory, or confined to the States in which it existed. Aside from the question of finding a market for slaves, the Southern people doubtless wished to avoid the embarrassment that faces them to-day of being outnumbered in some localities by as many as five or six to one. On the other hand the immigrant mechanics and free labourers knew the impossibility of competing with slavery. The men who made the country's welfare their life's work—the economists and administrators—knew the rest. And we all know it too. The Constitution was amended—slavery ceased to exist.

Walter's plan consists of three blocks [fig. 3]. The central one, which embodies the needs and aspirations of the formative period of the American nation; and two newer ones, a north wing and a south wing containing the two houses each linked to the old block—the old home of both houses. It is indubitably a practical arrangement, designed to afford the best lighting to the new wings and to shut out as little as possible from the old structure; but I like to think that it is something more than all that—that there is a beautiful symbolism about it, an artist's ideal achieved: that from the beginning Walter saw the two houses—the Northern States and the Southern States—widely separated, housing two different representations of the people, yet each essential to the existence and continuance of the other; that he saw in the old building the expression of a half century of common effort and common accomplishment founded upon the old plan representing the Constitution of the United States; common ideals crowned by that ornament of achievement, Unity, represented by its dome. First he planned and constructed the two wings and linked each to the old building—the two great wings of white marble were seen to predominate, to assert their importance over

the old structure. He then proposed a larger dome—an emblem of a greater unity, a greater objective, one that would be powerful enough to draw the two into closer relations and harmony with each other—and to mount this emblem of a great Amendment upon the old base of the Constitution; and, finally, to bring the old structure up to the quality of the new, in appearance at least, he found it expedient to give the old substructure a coat of white paint; but he planned for the reconstruction of its front in the same enduring and beautiful materials of which the wings had been built. He saw weaknesses in the substructure that would not permit him to construct his dome of the same material as the wings, so he built it of cast-iron, and, like the Amendment, which I feel it represents—by which the slaves obtained their freedom *and the suffrage at the same time*—it overhangs its substructure and is unpleasant to behold from many points of view. But so Walter deemed it expedient to leave it, and so also Lincoln left the Amendment, to succeeding generations to modify or reconstruct as may be found necessary or desirable. How is the present generation doing its duty to that trust? And to whose hands has it been especially committed? When the American Institute of Architects was formed—patterned upon this Royal Institute—Thomas Ustick Walter was selected to be its first President. He was the last representative of American architecture as it was.

Architecture as it has been in the United States may be said to have begun with Richard Morris Hunt. When he returned to the United States in 1855 Hunt had been for ten years a student in the Ecole des Beaux-Arts in the atelier of Hector Lefuel, and had worked under Lefuel and Visconti upon the construction of the extensions of the Louvre carried out during the Second Empire. He is credited with the design of the Pavilion which faces the Rue de Rivoli, opposite the Palais Royal. Hunt was the son of a Congressman, and went directly into the office of Walter, working for him upon the Capitol for six months. He then returned to New York, where he found two or three architects endeavouring to resuscitate Gothic architecture by attempting to follow the so-called Gothic Revival—or should I say Gothic post-mortem?—in England. Upjohn had built Trinity Church with a great steeple, typifying Religion dominating New York—a stone exterior of pleasing design, fit to go with an old English village, and a vaulted interior—that is, “vaulted” in *plaster*! There were one or two other examples of the same sort of thing—a kind of old-world scenery, planted in little parks, amidst Greek temples serving as sub-treasury, hotel, and theatre. He set to work vigorously to change things. He started an atelier, in which he had as pupils Mr. George B. Post and Charles Gambrill, Professor Ware and Henry Van Brunt. All of these pupils turned to the brand-new “Gothic.” Ware and Van Brunt practised together in Boston; Gambrill and Post, for a time, in New York. Upon the return to the United States, in 1870, of Henry Hobson Richardson, who had studied for several years in Paris, the firm of Gambrill and Richardson was formed; and in this office the late Stanford White worked as a draughtsman before he, too, went to Paris to study. Hunt had endeavoured to work in the *neo-grec*, but seems to have found it an up-hill task, and, in spite of his best endeavours and his uncompromising contention against engineers designing architectural work, such buildings as the State War and Navy Department at Washington, the Capitol at Albany, and the Philadelphian City Hall went merrily on. Richardson returned after the war was over, and at the time that the country was being fairly inundated with Irish and Italian labourers, German mechanics, and fortune-seekers and adventurers from all parts of the world, the administrative ability which America inherited from England was taxed to its utmost to preserve order and provide elementary education. Generals in the victorious Grand Army of the Republic were elected to the Presidency from the end of Johnson’s term until the first victory of the late President Cleveland over Blaine and General Logan in 1884. Bitter



UNITED STATES CAPITOL.
FIG. 3.—Ground Floor Plan as existing.

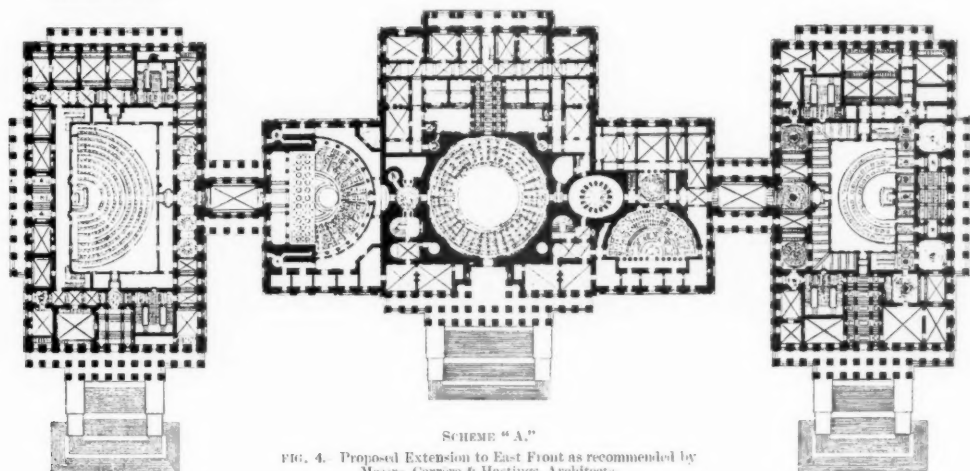


FIG. 4.—Proposed Extension to East Front as recommended by
Messrs. Carrère & Hastings, Architects.

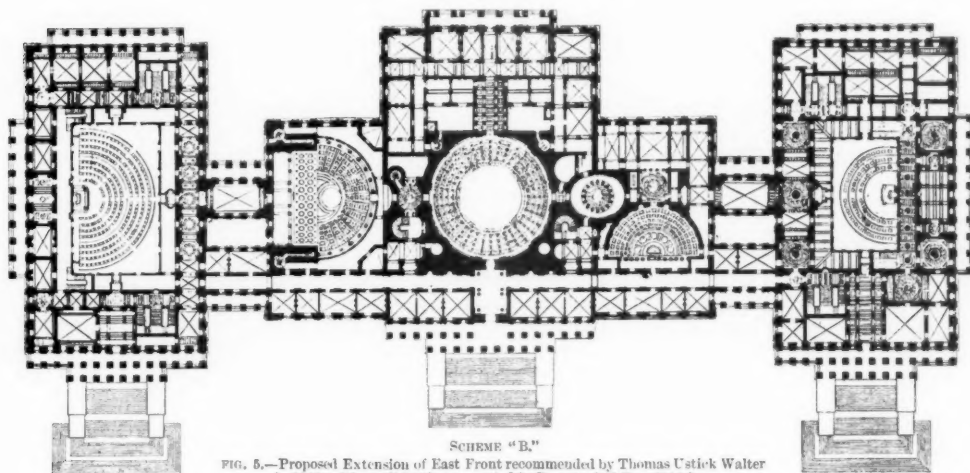


FIG. 5.—Proposed Extension of East Front recommended by Thomas Ustick Walter
in 1865, with modification suggested in Report of 27 Dec. 1904 by
Messrs. Carrère & Hastings.

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sectional feeling ran high. Bands of white men organised in the South to protect themselves against the semi-savage negroes who had been set free and given the vote; these bands became lawless terrorists. The Irish workmen and labourers in Pennsylvania adopted and pursued the same tactics against other workmen and their employers. Strikes, accompanied by extreme violence, occurred in nearly all the eastern cities of the middle west, especially near Pittsburg, Chicago, and Buffalo. Disputes between capital and labour were of constant occurrence, and frequently had to be put down by the State troops. Richardson almost immediately caught the rough, vigorous spirit of the times, and his Trinity Church at Boston, Court-house and Gaol at Pittsburg, and Chamber of Commerce at Cincinnati, attracted the attention of the public to the difference between the work of the architect and that of the engineers and builders.

Everybody wanted his building, whether a court-house or church, railway station or gate lodge, in "the Romanesque rock-faced style." An architect's client, who was wealthy but without taste, was described in the architect's office as being "rich and rock-faced." Richardson's work extended all over the country—even to Washington, where he built the residence of the late Secretary of State, then Colonel, John Hay. His design for the Cathedral at Albany was perhaps his greatest work, but the building was not erected from his design. He died in 1886, and his influence upon the architecture of the country terminated when, in 1888, in the competition for the huge Cathedral of St. John the Divine, a Renaissance design by Messrs. Carrère and Hastings was placed first by the assessor over a number of the most original, impressive, and imaginative works that had been produced in Richardson's style, including the design in course of erection by Messrs. Heins and La Farge, a huge *tour-de-force* by Mr. William Halsey Wood, and the masterpiece of the period, the design submitted by one Buffington and made by the late Harvey Ellis.

Hunt, who found his taste for Classic work opposed by the wave of Gothic and "Picturesque" popularity, had meantime compromised with the public by taking into association with himself Henry O. Avery, and together they produced the designs for the William K. Vanderbilt house, Marquand house, and others in the French transitional styles of Francis I. and Louis XII. The Vanderbilt house was very successful, one of the most charming designs I have seen, either old or modern, in the style. Henry P. Kirby, of New York, produced some fine imaginative studies in this style, which he published in his book of "Compositions." A number of strong men were won over to the style of the Early French Renaissance, including Ellis, who produced some interesting work in St. Louis, among other things the City Hall; Bruce Price, of New York, who designed the Chateau Frontenac, an hotel for the Canadian Pacific Railway at Quebec; and Clarence Luce of New York, Louis Hickman of Philadelphia, Julius Schweinfurth and George Newton of Boston, made studies of conspicuous merit, nearly all of which were produced between the years 1888 and 1892. In 1889 several works by Messrs. Carrère and Hastings were published, which had been built at St. Augustine, Florida, in the style of the Spanish Renaissance, but highly original and beautifully adapted to American needs, composed on lines of pure design and ornamented with paintings, mosaics, and decorative sculpture. Messrs. McKim, Mead and White produced several works in the Italian Renaissance style—the Villard houses and the Century Club; the Madison Square Garden, with the tower similar to the Giralda of Seville, and the *New York Herald Building*, by Stanford White. The publication of the early studies by Mr. McKim for the Boston Public Library, which clearly showed that it owed its inspiration to the Library of Ste. Geneviève, in Paris, had a very beneficial influence, and for several years was regarded by architects and the public generally as the finest example of architecture in the United States. Its extent and costliness indicated something of the demands for education of

the citizens of Boston, and its conservative architecture is unquestionably only a reflection of the character of the representative people of that city.

The Columbian Exhibition afforded an opportunity, for the first time, of bringing together the combined artistic abilities of several of the then leading architects of the country. Its completion marks the end of the experimental period and the commencement of the school of the present day. Again the best work owed its inspiration to French designs. From the time of this Exhibition down to the present day the history of the development of American architecture discloses a rapid march of progress. The Classic influence, re-established in the public favour by the Exhibition, has been maintained, and has been accepted in one or another of its manifestations throughout the country. Numerous architectural schools have been founded; and the old ones at the Cornell, the University of Illinois, and the Massachusetts Institute of Technology, improved their courses of instruction, modelled in principle upon that of the great school of Paris. The atelier system, first attempted by Richard Hunt, was successfully inaugurated about fifteen years ago (by Mr. E. L. Masqueray, Chief Architect of the St. Louis Exposition, 1903, who was at the time Hunt's chief assistant), and has been fostered by the Society of Beaux-Arts Architects, which has made its principal objective the education of the younger men. The Architectural League of America—a society composed of societies, whose members are the various architectural clubs which in several of the large cities do auxiliary work to that of the Society of Beaux-Arts Architects, especially as regards the education of those office-trained men whose circumstances prevent them from taking a regular course in one of the universities—has given birth to and rocks the cradle of the architecture of the future.

It would be an almost Homeric catalogue that would attempt to include the works worthy of honourable mention which have been built since the time of the Columbian Exposition, and I am sure I need only name a few of the architects who have produced them to recall to your memories views of different works of merit by each of them, as Daniel Burnham, Chief Architect of the Columbian Exposition 1893, McKim, Mead and White, George B. Post, John M. Carrère, Chief Architect of the Pan-American Exposition at Buffalo 1901, Walter Cook, Thomas Hastings, Cass Gilbert, Whitney Warren, E. L. Masqueray, R. H. Hunt, Henry Hornbostel, Ernest Flagg, Louis H. Sullivan, Peabody and Stearns, Lord and Hewlett, York and Sawyer, Tracy and Swartwout, Edward Pearce Casey, Hornblower and Marshall, Despradelles and Codman, Wood, Donn and Deeming, Hiss and Weekes, Herts and Tallant, Hale and Rogers, Rankin and Kellogg [fig. 6], Trowbridge and Livingstone, Kelsey and Cret, Harold Magonigle, Donn Barber, J. H. Freedlander, C. H. Blackall, Arnold Brunner, John Galen Howard, J. Randolph Coolidge, Wyatt and Nolting, Pell and Corbett, Albert R. Ross, Howells and Stokes, Shepley Rutan and Coolidge, Guy Lowell, Parker, Thomas and Rice, Cope and Stewardson, Frank Miles Day, Kirby, Petit and Green, Edgar Seeler, and Raymond Almirall.

Of those who indulge their fancy in Gothic the most successful in obtaining picturesque results are Messrs. Haight and Githens, Cram, Goodhue and Fergusson [fig. 7], Allen and Collens, Henry Vaughn, Cope and Stewardson, Field and Medary, and, though only occasionally, Julius Schweinfurth, Frederick M. Mann, Albert Kahn, Maginnis, Walsh and Sullivan, and R. Clipston Sturgis.

Of the younger fraternity whose ability in monumental work has been given opportunities to make itself known are John Russell Pope, Kenneth Murchison, Janssen and Abbott, Delano and Aldrich, Carpenter and Blair, Waid and Parsons, D'Hautville and Cooper, De Gelleke and Armstrong, Louis C. Spiering, Mariner and La Beaume, Calvin Keissling, Jackson and Blake, Andrew Sauer, Paul and Seymour Davis, John Van Pelt, W. W. and Hunt

Bosworth, J. Milton Dyer, J. M. Lyle, A. H. Cox, Duhring, Okie and Ziegler, W. K. Fellows, and Howard Greenley.

Then there are those who, either by choice or force of circumstances, have devoted themselves to some special class of work, as residences. Of the great number of these architects I will mention only those who have done a considerable amount of excellent work, which enables me to include Foster, Gade and Graham, Wilson Eyre, Charles Platt, Oswald Hering, Lawrence and David Boyd, Little and Browne, Chapman and Frazer, W. G. Rantoul, Claude Bragdon, Alpheus Chittenden, Elmer Grey, Myron Hunt, Frank Lloyd Wright, Hugh Garden,



FIG. 6.—U.S. COURT-HOUSE AND POST-OFFICE, INDIANAPOLIS, IND.: MAIN (SOUTH) FRONT LOOKING ALONG THE TERRACE.
(Messrs. Rankin & Kellogg, Architects.)

Robert Spencer, Frank Chouteau Brown, John T. Comes, Hoppin, Koen and Huntington, Grosvenor Atterbury, Percy Griffin, James T. Kelley, Newman and Harris, Charles Barton Keen, Meade and Garfield, George B. Page, and Stratton and Baldwin.

These names stand for thousands of well-designed buildings erected during the past decade or two, and there are others.

It is safe to predict great work in the near future from a number who are as yet comparatively unknown, or well known only as draughtsmen or students: Leonard Schultze, George Licht, Edwin Hewitt, Arthur Brown, jun., Theodore Peitsch, J. F. Clapp, George B. Ford, E. Frère Champney, John Wynkoop, W. Sydney Wagner, Frederick C. Hirons, Huger

Elliot, E. J. Willingale, Arthur Nash, W. T. Groben, John H. Phillips, Oscar Wenderoth, Roger Gilman, Walter Karcher—to which list many names are constantly being added.

Let us suppose that we now return to Washington and are met at the gate to the midway of the station by a friend whose acquaintance we made years ago when we were architectural students in an office "out West"; he was then the erecting engineer on a job designed by the "boss," but is now a Congressman, who we shall call O'Grady of Montana. He is short, stout, and talkative, well-groomed and well-dressed except for his watch-chain, plain-spoken—calls a spade a spade—and knows Washington from A to Z and says so!

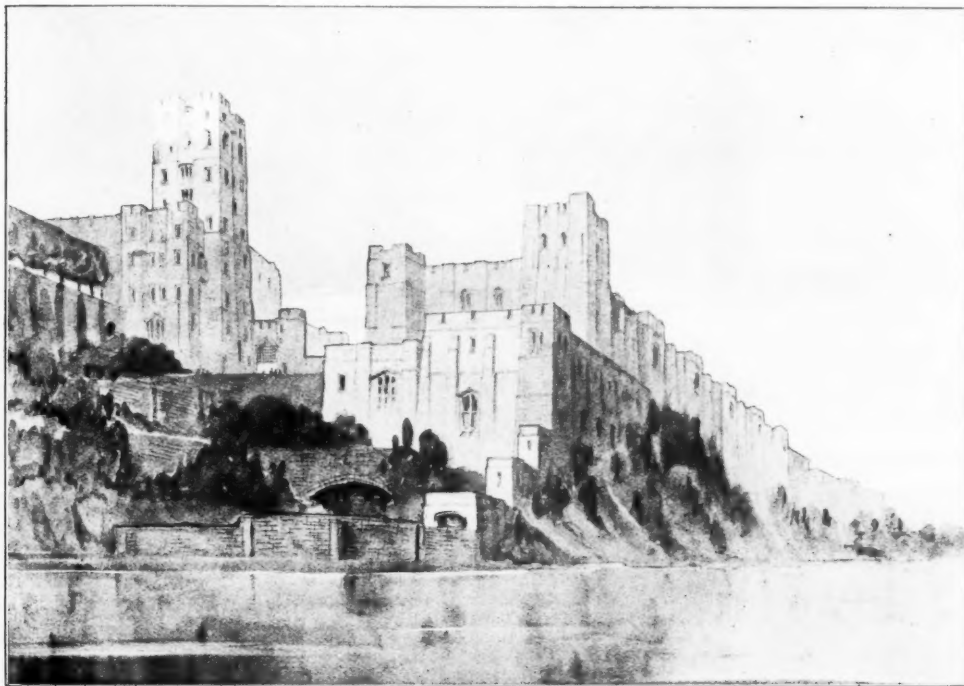


FIG. 7.—U.S. MILITARY ACADEMY, WEST POINT: THE APPROACH FROM THE RIVER.
(Messrs. Cram, Goodhue & Fergusson, Architects.)

"Hello! old man," he says; then, "Who's your friend? English architect? Oh yes, of course—now I know who you are; have often seen your name below the pictures in the architects' papers at the club. Just been reading your article. What d'you think of this country, anyway? Seen much of it? How long are you going to be here? Great Scott! three days! Expect to see the whole country before you go, or just the station? Going to write a book upon it when you get back? Have a ball? Good buffet here—not up to Charing Cross though; hey, what?" and turns to us with the remark: "You'll find Washington changed since you were here last; lots of things have happened. Say Mr.—um—English architect—I beg your pardon, I forget your name—I've been reading about that ideal town you're going to show us twenty years from now, and when you get it ready I'm coming over to have a look at it—"

"See here, O'Grady, don't you understand," we interrupt, "that was a purely imaginative study. You must not rag our friend in this way."

"Not at all—take it from me that we'll all live to see that town of yours. I'll back

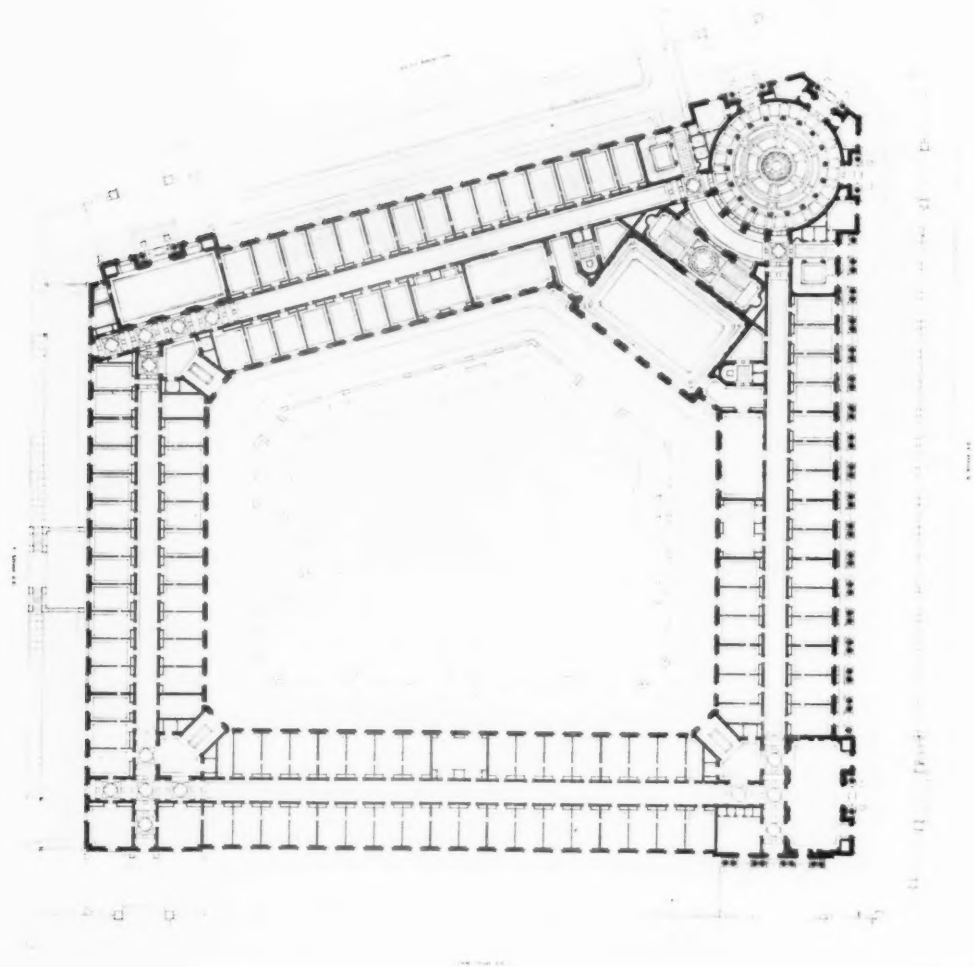


FIG. 8.—PLAN, OFFICE BUILDING OF THE HOUSE OF REPRESENTATIVES, WASHINGTON, D.C.
(Messrs. Carrere & Hastings, Architects.)

Charlie Yerkes' opinion against any of 'em, and you know what he said about John Bull? 'It takes a long time to get him going, but when he starts nothing can stop him'—and that's a fact. Of course you ought to have made an estimate; but that's easy. Work the same game old Walter worked when he built the new dome on the Capitol."

"That sounds interesting," says our guest, who hasn't turned a hair while O'Grady has been talking. "tell us about it."

"Well, it's this way," says O'Grady, "you see, he had put up the big wings first—all white

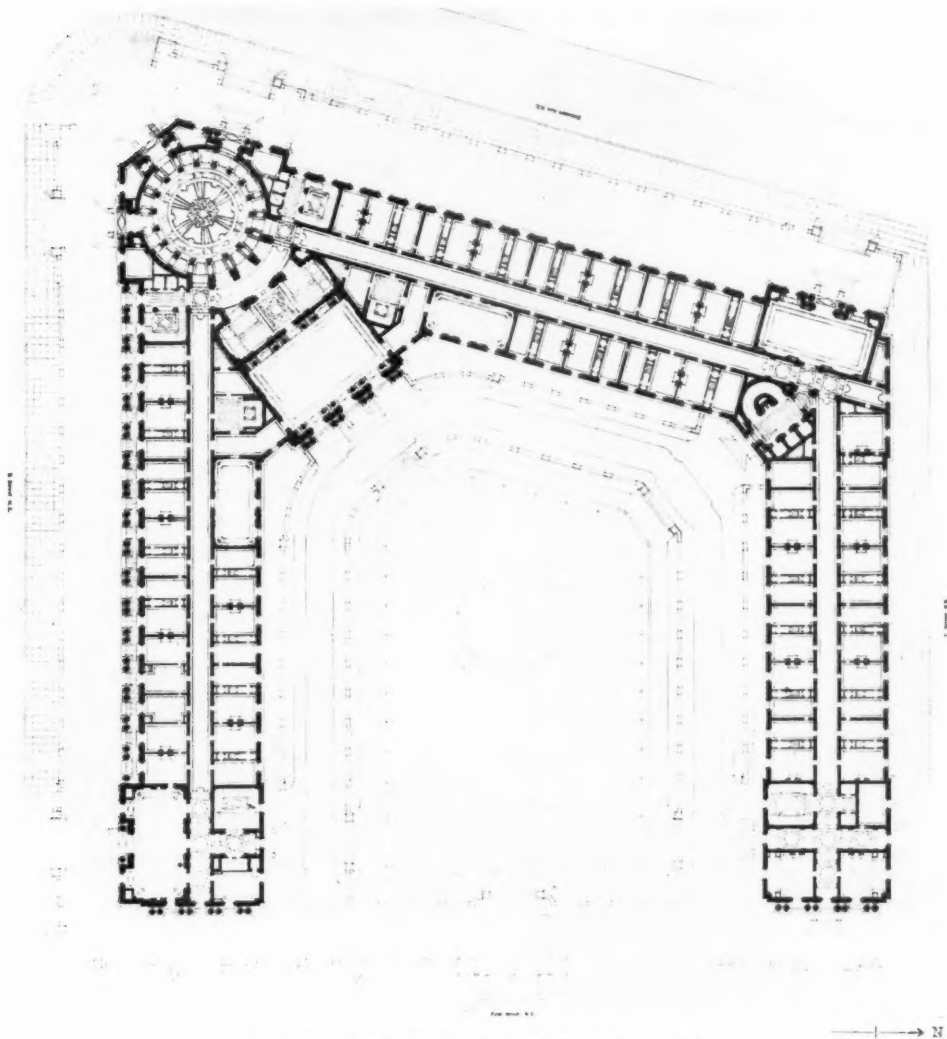


FIG. 3.—PLAN, OFFICE BUILDING OF THE SENATE, WASHINGTON, D.C.
(Messrs. Carrere & Hastings, Architects.)

marble—and they made th' old dome look like a wart on top of th' old building: so one night when Congress was adjourning, when the representatives from Texas and Kentucky had been drinking champagne from the celery glasses, an' the ladies were there to see what was going on and say 'how lovely,' he flashes a big picture all done with a blue sky and green trees—none of your impressionist sketches with the sky green an' th' trees blue—and says: 'Gentlemen, will you

appropriate before you adjourn a hundred thousand dollars in order that this work may proceed?' Of course they would! and of course they did; and the money just paid for tearing down th' old dome, which had been pretty solidly built; and then they got another appropriation. Can't do things like that in England? No, I suppose not. But speaking of ideal towns, I suppose you know that away back in Washington's time there was a frog-eating Frenchman who came here and planned *this* town. According to all the authorities he did a good job of it, and we have a right to be proud of it, and as far as I am concerned I *am* proud of it, and proud of the Frenchman, for he was a good American; but the Frenchman isn't entitled to all the credit, though he was a prophet without many honours in his adopted land, and, I am afraid, without just payment for what he did. We all know now that he was a great man, and we voted a lot of money at the last session to have his remains dug up from the Riggs

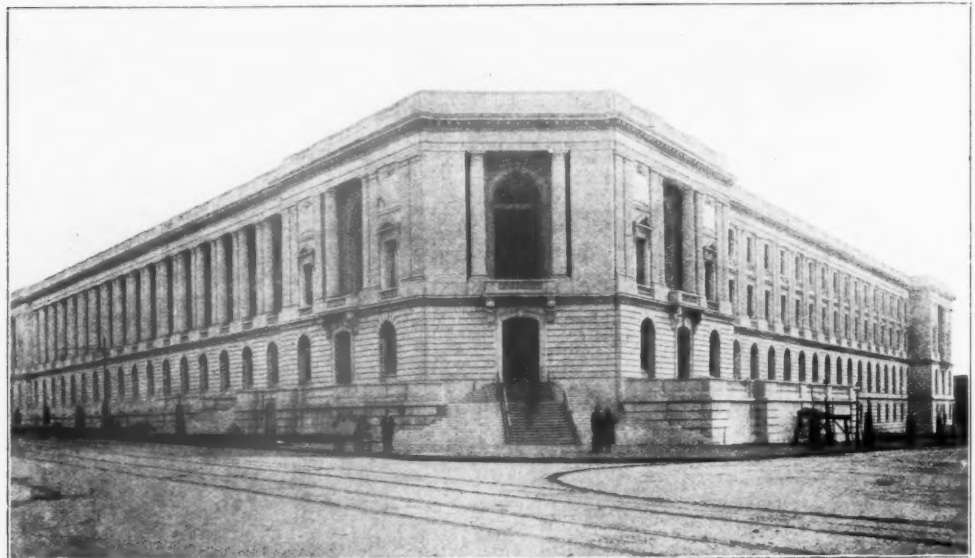


FIG. 10.—OFFICE BUILDING, HOUSE OF REPRESENTATIVES, WASHINGTON, D.C.: VIEW FROM NORTH-WEST.
(Messrs. Carrère & Hastings, Architects.)

farm and buried at Arlington; and when the new bridge is built and the Mall made into an avenue that is going to make the Champs-Élysées a second-rater, I am going over to the national necropolis to see his monument. Speaking of this avenue, have you ever seen *this* map? It was made by the committee appointed in 1901 to sit during recess and report to the Senate upon a comprehensive scheme of parks for the district of Columbia. Senator McMillan was at the bottom of that scheme. He was a good Irish-American."

"Not at all!" we correct. "He was a Scotch-Canadian, was brought up in Detroit, and became Senator for the State of Michigan."

"That's right," assents the Congressman. "A Scotch-Canadian, and all the better American for that! Well, his town, Detroit, was laid out by the same Frenchman—what's his name?—L'Enfant!—and McMillan took a lot of pride in his own town; also a great interest in the map of Washington. He thought the park system of the national capital should be given some consideration by the Government, and used his influence to bring it

about. The Senate Commission appointed an advisory committee—Messrs. Burnham, McKim, Olmstead, and St. Gaudens. The first two were architects, the others a landscape architect and a sculptor respectively. Burnham had been Director of Works at the Columbian Exposi-

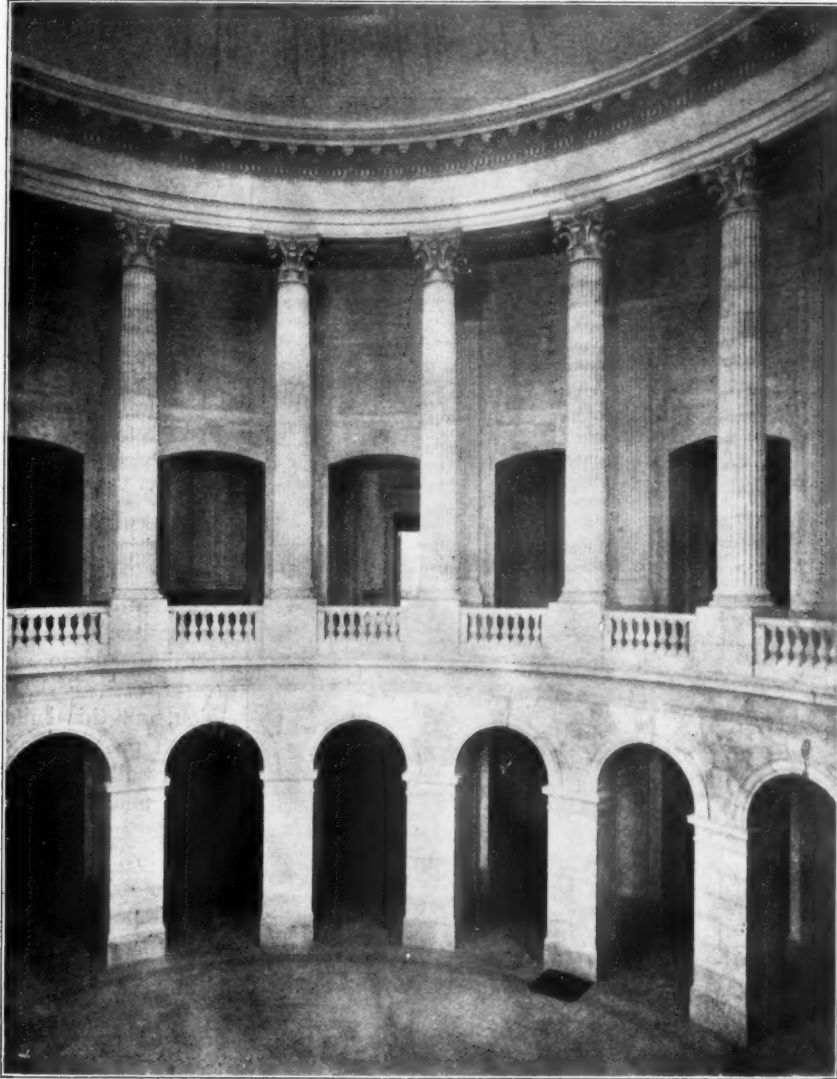


FIG. 11.—ROTUNDA IN THE OFFICE BUILDING OF THE HOUSE OF REPRESENTATIVES, WASHINGTON, D.C.
(Messrs. Carrère & Hastings, Architects.)

tion ; as far as I know he did not personally design any of the buildings, but was responsible for the selection of the architects who did, and he stood between them and the company's officers, and educated the latter up to the ideas of the former, and McKim, Olmstead, and

St. Gaudens had all worked with him in producing that Exhibition. Just before the Senate appointed the Park Commission Burnham had been asked to design a new station for the Pennsylvania Railroad for its site in the Mall, but when the Commission decided that the only thing to do was to go back to L'Enfant's plan—if possible—it was Mr. Burnham who went to the officials of the railroad to induce them to remove their tracks—the greatest obstruction to its possible development—from the Mall. That was not easy. The site in the Mall

was better than any that could be offered in exchange, and at first Mr. Burnham's suggestion was strongly opposed by the railway officials. But when he proposed a Union Station and explained what it was desired to do as regards the Mall, the President of the Pennsylvania, remarking that the Pennsylvania was 'pretty big, but not big enough to stand in the way of such an improvement as this,' acquiesced. The President of the Baltimore and Ohio—the other railway entering Washington—carefully considered the proposition, agreed to do all he could to meet the wishes of the Park Commission, and this building in which we are standing is the result. A tunnel was built under the town, as you see on the map. I am used to big jobs, but this was a cracker-jack. The terminal site is 165 acres."

"Twenty-five acres larger than the whole ground of the Franco-British Exhibition!" exclaims our visitor.



FIG. 12.—STAIRCASE HALL, OFFICE BUILDING, HOUSE OF REPRESENTATIVES, WASHINGTON, D.C.
(Messrs. Carrère & Hastings, Architects.)

"Yes—165 acres, and as it lay at low level, tide-water got in below, so it required more than 3,500,000 cubic yards of filling in. The front part of the building is about the same size as your New County Hall—I think it is said to be about 765 feet long. It is built of white granite, and the whole scheme, including train sheds and lay-out of the yards, cost about twenty million dollars—that is more than four million pounds of your money. But come! Take a look at the place! This waiting-room is the largest in the world, and——"

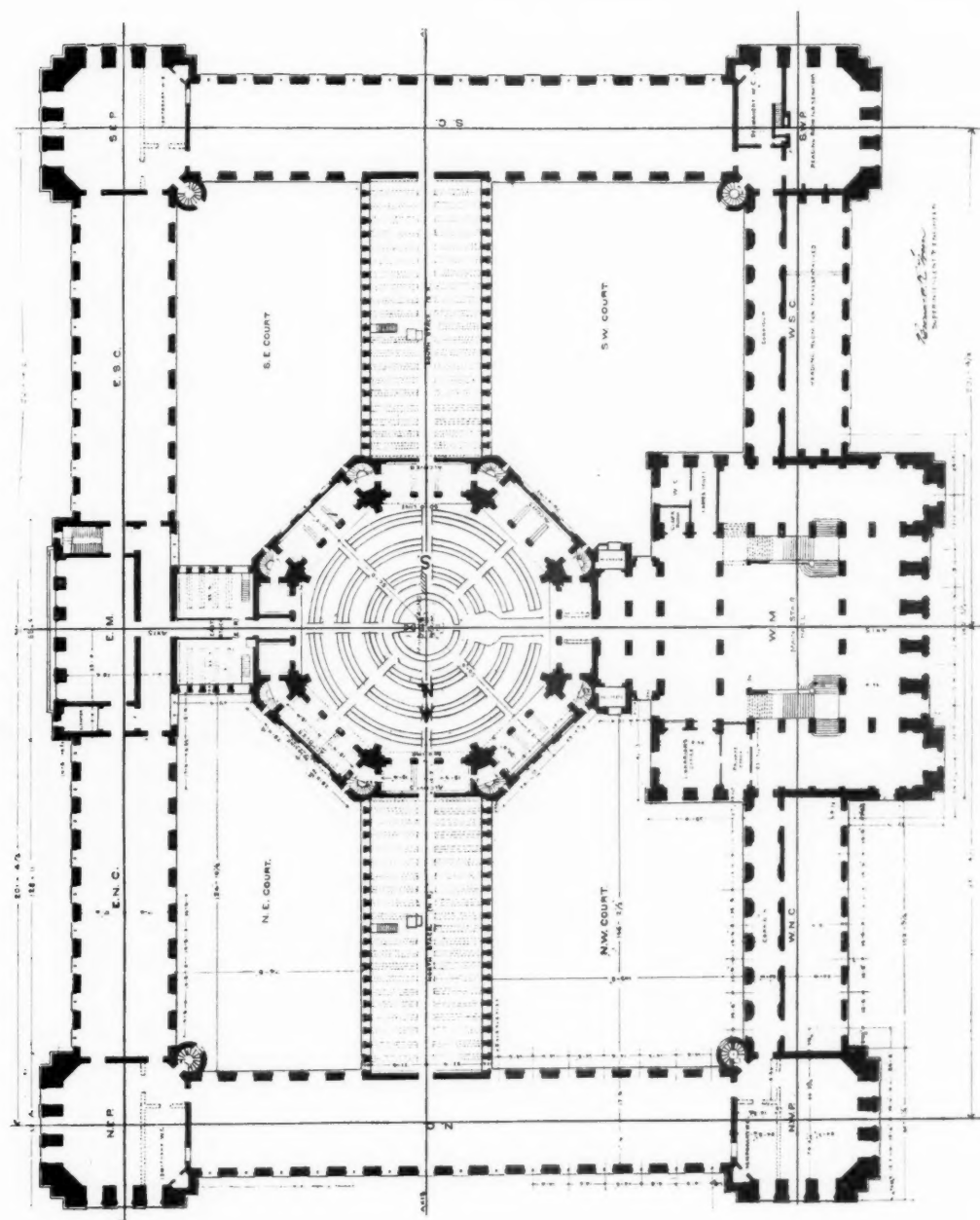


FIG. 11.—CONGRESSIONAL LIBRARY, WASHINGTON: GROUND FLOOR PLAN.
(Messrs. Sullimeyer & Pele, P. J. Pele, E. P. Casey, Architects.)

"Never mind about that!" we protest.

"Well now," he continues, "do you know when we were considering—over in the House—making an appropriation towards this scheme, I said the same thing to the Secretary of the Copper Miners' Union, who had come to see me about putting on a 'rider' to make the roof of copper—he came back at me with those very words? And he went on to say: 'I don't care how big it is, but look out that it's good. Don't make it so big that everybody will see it, and so ugly that everybody will curse it and the nation and the railways will be ashamed of it. Look out that there's no Aberdeen gold and no imitation marble used, and—and let 'em know that one copper roof is cheaper in the end than three of cement tiles that fade and won't stand the weather—make it *better* than anything like it in the



FIG. 14.—CONGRESSIONAL LIBRARY, WASHINGTON: S.E. VIEW.
(Messrs. Smithmeyer & Pelz, P. J. Pelz, E. P. Casey, Architects.)

world, and the miners 'll be with you.' Still, you always tell us how big the Roman halls were, and there wasn't one as big as this in all Rome. This room is 220 feet long, 130 feet wide, and 90 feet high. The outside of the building is designed as the entrance gate to Washington, and that is the reason it is regarded as one of the public buildings, and is intended to be in harmony with the others rather than look like a railway station. The entrance arches are 50 feet high, and the centre feature of the front is about 100 feet."

"That is to say, about 20 feet higher than Selfridge's in London," comments our Englishman.

"Yes, and designed by the same architect—Burnham," observes O'Grady, and continues: "The plaza in front will be a great improvement—the Government and the District are doing that—and will make a fine approach to, and give a good view of, the station. . . .



FIG. 15. —CONGRESSIONAL LIBRARY, WASHINGTON : THE ROTUNDA.

... Speaking of the District, you know it has just built a new municipal building! Quite a fine structure, too, about two hundred by two hundred and fifty feet, and one hundred feet high—we shall see it later. Something like your new Government Office, but it hasn't any towers."

We have passed into the carriage porch while the Congressman has continued to tell us of the new works in Washington.

"Jump in this cab," he commands, indicating a motor carriage, "and we'll drive round and see what has been done since the Senate Committee recommended that the only way to make Washington beautiful was by carrying out its 'Park System'—that is 'a rose by another name' for a town plan. I haven't paid much attention to the parks themselves, but I've taken an interest in the buildings; for in the days when I was a building superintendent—before I became involved in politics—I had an idea of becoming an architect. See that building just ahead of us—that's the new Senate Office building, it faces south [fig. 9]; and the one to the left is the Library of Congress, facing west [fig. 13]; over on the far side of the square facing north is the House Office building [fig. 8], and of course you recognise the east front of the Capitol; the sandstone part of the old block is painted to look like the new wings, but the front is soon to be pulled down and rebuilt in marble, according to the designs of the architects who built the Senate and House buildings, who designed the whole group relatively—not each building independently of the others.

"There's another thing Walter did," continues O'Grady. "Before he died, he made a plan for extending the east front of the Capitol by arranging offices along it [fig. 5], and left it to his heirs to go to Congress for the money when the country couldn't stand the appearance of the old front any longer. The excuse as to offices being needed won't work now, because Congress has built for itself these two fine office buildings"—indicating two white marble edifices with coupled Doric colonnades as we turn west along North B Street, then south and stop in front of the Capitol, while Mr. O'Grady points out that the Library has blocked up the view down Pennsylvania Avenue to the south-east, and also that it occupies but one-half of the east side of the square. "At the other side we shall probably build the Supreme Court Building, which we are bound to have soon. The Senate Commission did not approve of another building just like the Library, with a dome, and blocking up the view down Maryland Avenue, so we shall have to build some other building on the opposite corner—indeed, several more buildings are needed. This whole square is to be enclosed by public buildings in the future—the not very distant future.

"But as to the front of the Capitol, it isn't a question of needs but of appearances. The front is going to be rebuilt in marble, without any 'practical' subterfuge, and because at present it is unworthy to be part of a building that stands for the people of the United States. Walter made a plan to improve it, but the addition of offices would have been unfortunate for the effect. Carrère and Hastings have made some changes to his scheme that will make it just as it should be."

He pulls from his pocket a large pamphlet. "See here, this is the Report," which he reads as we turn to the right and drive round the square. "This is what the architects have to say about it themselves:—

"We respectfully submit Plan, Scheme A [fig. 4], as being, in our opinion, the most conservative and in every way the best solution of the architectural problems involved in correcting the defects of this façade, to which Mr. Walter called attention in his Report of 1865.

"Realising, as already stated, that the composition of this façade, and especially the relation of wall surfaces to each other, should be changed as little as possible, we have moved the entire front of the central portion forward, only so far as necessary to bring the main

wall of the building, at the centre, under the extreme projection of the dome, and give the dome the apparent support which it should have. At the same time, we have added one column on each side of the main pediment, broadening the pediment accordingly, so that it will dominate the two pediments of the Senate and House wings, which Mr. Walter so strongly felt should be done [fig. 5].

"In this scheme no consideration has been given to increased space within the building, and the problem has been solved strictly according to the architectural necessities of the case; nevertheless, the moving of the wall easterly twelve feet ten inches (12' 10") gives, on the main floor to the east of Statuary Hall, a series of alcoves which can be used to advantage for the additional storage of documents; and, to the east of the Supreme Court, a similar series of alcoves, back of the present screen, for retiring or robing rooms for the Judges. Similar alcoves would also be obtained, in both cases, on the floor above, which could be reached from the central portion of the building and used for various purposes. These changes would in no way affect any of the internal arrangements or even the decorations on the main floor."

We drive now to the House Office building [fig. 10], and inspect the beautiful interiors [figs. 11 and 12]. O'Grady is silent, but looks pleased and throws out his chest, while it is the architects in our party who wax eloquent. The design of these interiors seems to have commenced where the most refined and scholarly work of the best period of the style of Louis Seize left off; we see the rotunda and staircase-hall.

After a chop in the grill-room, O'Grady proposes a visit to the Library of Congress. "Let us go round to the back, which I like better than the front [fig. 14], and then drop in and see the entrance-hall, rotunda [fig. 15], and corridors," he proposes, and action is suited to the word. As we drive round the Library building he volunteers the information that "it was commenced by a couple of Germans, Smithmeyer and Pelz, but finished by three good Americans—General Casey, his son Edward Casey, and Bernard Green. But young Casey was the real architect who made it worth looking at; it wasn't his fault that the dome on the Library, when seen from Pennsylvania Avenue, looks as though it were on one wing of the Capitol. I guess he'd have it torn down now if he could; but he did pretty well with the interiors; and the plan too, which is by Smithmeyer and Pelz, is pretty good, and we'll leave the changes to the young lads who are now growing up, for there's a lot of work still to be done before we get to changes.

"The next thing to see will be the Mall." Again he fumbles with his papers, which he takes from his pocket—a reproduced detail of the Avenue, which, in accordance with the advice of the Senate Commission, is to be cut through the Mall from the middle of the west front of the Capitol straight to the Washington Monument, and beyond it all the way to the river—or almost; that is to say, to a round point near the river where the monument to Lincoln is to be built, and from which the approach to the bridge over to Arlington is to commence. You can judge from the plan as to what it will be like. "Two of the big buildings are almost built; that pair is only part of the Agricultural Department"—and, as the cab whirls down South B Street, he points to a pair of buildings on the opposite side of the Mall, reminding us slightly of those in the Place de la Concorde, Paris, and we remark upon the fact. "Yes," says O'Grady, "and it will look more like it when they build the central feature. What do you think of that 'link'?" he inquires of our guest, and without waiting for a reply remarks, "I don't know of anything finer than those two buildings near Maxim's, with the Madeleine in the background, as you see them from the Chamber of Deputies; but my idea is that if the Madeleine was brought right up into line with the other two, the big columns would make the little ones look small—in both senses of the word. The next one will be a good deal better when it is completed—that is the new National Museum, which is neither as big nor has it as

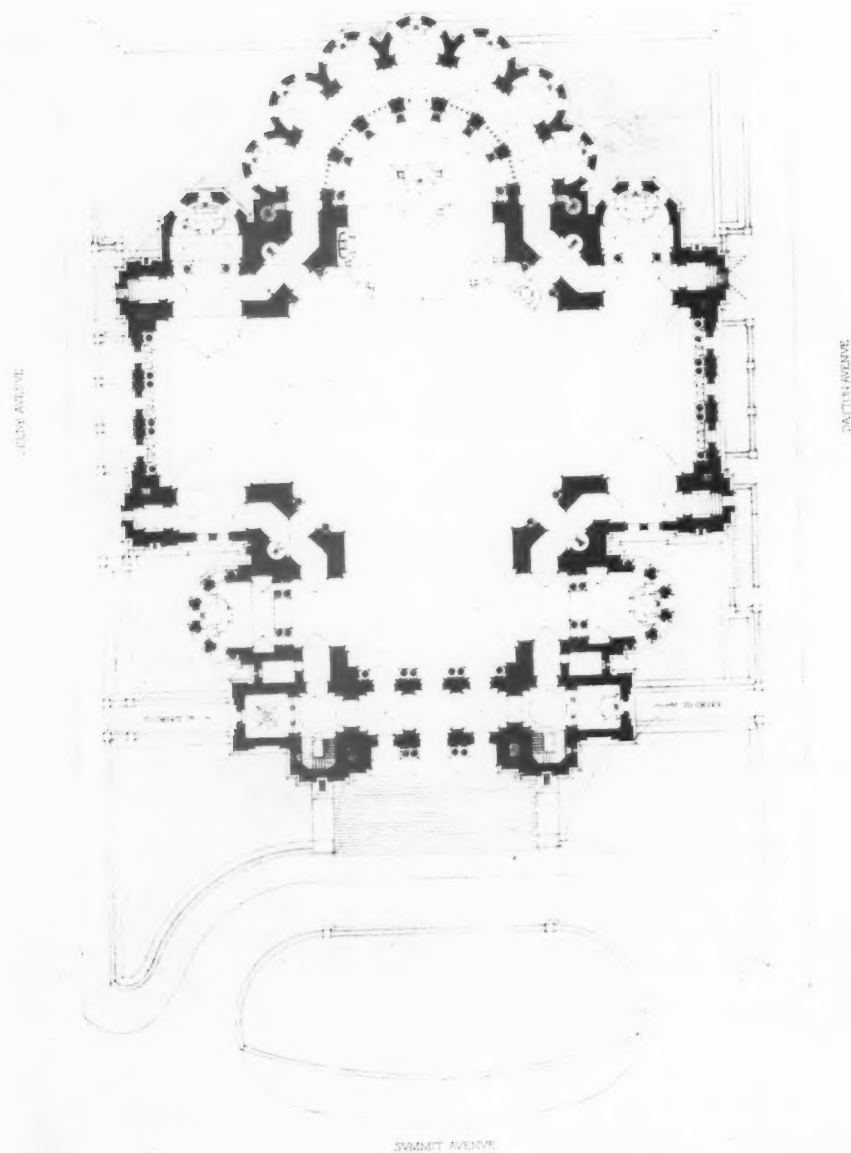


FIG. 16.—CATHEDRAL OF ST. PAUL, ST. PAUL, MINN.
(E. L. Masqueray, Architect.)



FIG. 17.—CATHEDRAL OF ST. PAUL, ST. PAUL, MINN.
(E. L. Masqueray, Architect.)

fine a collection as the British Museum, but hasn't much to learn from it in some other respects."

We have driven past the Washington Monument, and the Congressman points back over his shoulder and comments, "Only a pile of stone *now*—looks like a big telegraph post stuck in the mud—but when the base proposed by the Senate Commission is added and the trees planted in a regular way I think it is going to look well, because the small work around the base and the road leading up to it will make it look its 555 feet in height, and it will be more effective and look like a monument.

"This building which is going up on the corner to the left is the new Pan-American Peace Palace, by Kelsey and Cret, of Philadelphia; and just beyond is the club building for the Society which calls itself the Daughters of the American Revolution—most of them don't look it, but a few do.

"Here's a building that hits me right in the eye. Good! isn't it? The Corecoran Art Gallery. Has a ripping interior. Hey! *driver*! turn to the right and go round to the other side of the White House!"—then to us, "We must go into the President's house, it will suit you architects to a tee! It was fixed up inside by McKim for 'Teddy' Roosevelt."

As we pass between the President's house and the Treasury we ask, "Why didn't you drive straight to Pennsylvania Avenue instead of coming round to this side?"

"Because," replies the Representative from Montana, "that State War and Navy building has got on my nerves; for an absolutely ugly building that's the limit! When I first came to Washington eighteen or twenty years ago, and my friend Jerry O'Rourke ran the Supervising Architect's office, I used to think his designs, or the designs his office-boy made, were all right; I couldn't tell them from those of Richardson or Harvey Ellis, though Harvey used to curl up in his chair and go to sleep when I told him so; but I never could stand Mullet's work, and this building is about his worst. Since this lot of new buildings commenced, there isn't a M.C. in Washington that hasn't become more or less interested in architecture, and some of them know which is the best of two good things. I guess the exhibitions of the Architectural Club have had something to do with it. I always go to see them regularly every year."

We enter, see the interiors, and leave the President's house; but O'Grady has continued to talk about the architectural exhibition and the water-colours, and we ask, "What other things are there to see? Was the National Church ever built? And how about this proposed new Avenue through the Mall—L'Enfant's West Capitol Street—does everything go smoothly, is everybody agreed?"

"As to the first question," he replies, "besides a number of good commercial and private buildings, there is the Carnegie Library, the War College, by McKim, Mead and White, but it's too late to go there now, so you can go to see that to-morrow morning and run over to Annapolis in the afternoon and see the Naval Academy [fig. 18]—which we owe to your *confrère*, Ernest Flagg of New York—I mean we wouldn't have had the new academy at all if Flagg hadn't gone after the Navy men and told them their old buildings weren't fit to train a dog in. As to the National Church, no! As a nation I don't think Americans go much on religion. The old "House" Chamber in the Capitol is used for the statues that L'Enfant wanted a church built to contain. The only cathedral in America that would do for Washington is the new one that your friend Masqueray is building in St. Paul, Minnesota [figs. 16 and 17].

"I thought," remarked our English friend, "there was a handsome cathedral being built from designs by Bodley. Do you know about that?"

"Do I know about it? That ——" he is about to say something but cannot, then changes his mind and says softly: "I have seen the design, and I suppose it is really a fine thing,

though I think Gothic is an anachronism, and in Washington an exotic. A Gothic cathedral in Washington is as *bizarre* as a forty-story office building would be in Oxford."

"But what other buildings remain to be built? I should think nearly all have been either completed or commenced," says our guest.

"Well, the Treasury Department is overcrowded; it would be glad to get rid of the office of the Supervising Architect, and the Supervising Architect would probably be glad to be rid of the Treasury Department. There is that Council of Fine Arts recently appointed by President Roosevelt which must be made permanent and given a home somewhere—possibly in that corner opposite the site suggested for the proposed Supreme Court-house. It will not be long before the Government will find it expedient to create a separate department to take care of its works—possibly two departments—one a Department of Works and the Fine Arts, which would control everything of an architectural character—the buildings, bridges, parks, and all their details, furnishings, equipment, and decorations, which would relieve the Treasury Department of a heavy load; and another, which might be a Department of Engineering Works, to relieve the War and Navy Departments of a similar strain, by taking over all such works as dams, sea-walls, harbours, levees, forts, earthwork, and canals. Before long, even with these changes, one of the three departments in the State War and Navy building will have to find new quarters, and even for the two that will be left it will remain inconvenient and unsatisfactory—and that means unprofitable."

"You don't suggest," we exclaim, "that the State War and Navy building will ever be materially altered, do you?"

"We shall see," he replies. "You would have said the same thing about the New York Post Office five years ago, but it has been proved that the country can save money by building a new one. By the way, I haven't answered your question about the Mall—as to whether everybody is agreed—as a matter of fact the Department of Agriculture did try to interfere with the scheme, but Senator Newlands stopped the game by placing a 'rider' on the appropriation, so that the Department could only get the money for the building by setting it up in a given position. But I believe the time will come, and I think within the next four years, when all will be agreed that the plan of the Senate Commission must not be altered. Why do I think that? Because nearly every new M.C. is a college man, and nearly every college of importance is planned on a comprehensive scheme. See the new plan for the University of Minnesota by Gilbert, and those for the Western University of Pennsylvania by Hornbostel; then there are Cornell, Pennsylvania, Columbia [fig. 19], the University of the City of New York, Harvard, Yale, Princeton, Washington in St. Louis, the University of California, to mention only a few which have been, or are in process of being, built to a pre-arranged plan. They cannot help but have some influence."

"So you really think my Ideal Town is a possibility?" asks our English guest.

"I am sure it is a *possibility*," responds O'Grady, "but whether or not it is a probability depends more or less upon your own professional fraternity—you know the sayings as to the enemies of one's own household, and about households divided against themselves. I can remember the days when every architect who came to see me not only 'knocked' the bad work of the Supervising Architect under the old *régime*, but also wanted his job. It's different nowadays, nobody seems to have an axe to grind, they all work for the general welfare in public and have their rows out between themselves privately; of course there are still among them the 'yellow dogs' who bark at everything but their own bone, but those that are any good belong to one or another of the societies—sometimes to several, and they are all pals. They come here organised like an army; there are three or four strong societies, but you cannot put one up against another, for they pull together—and at times let

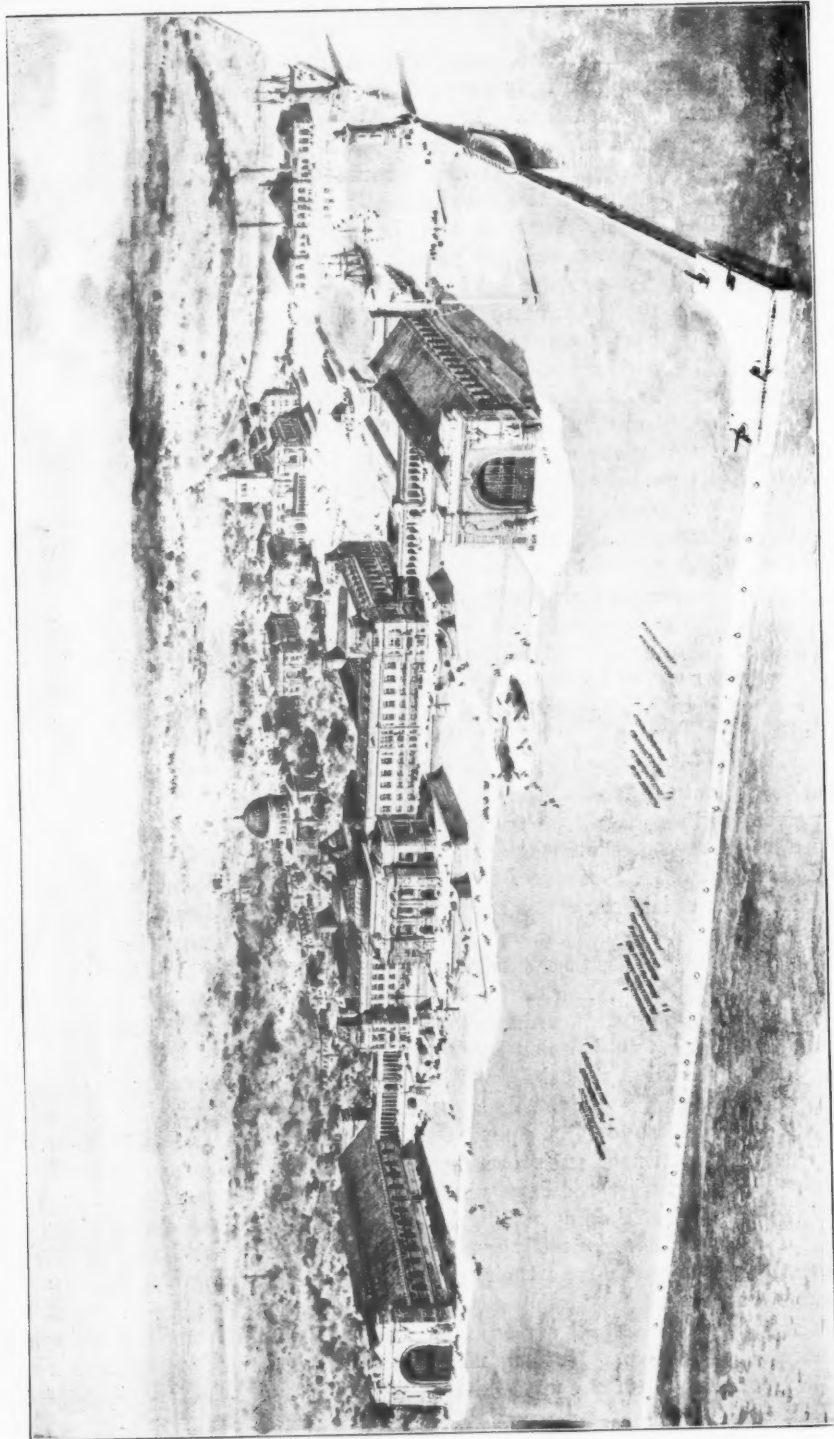


FIG. 18.—THE UNITED STATES NAVAL ACADEMY, ANNAPOLIS, MD.
(Ernest Flagg, Architect.)

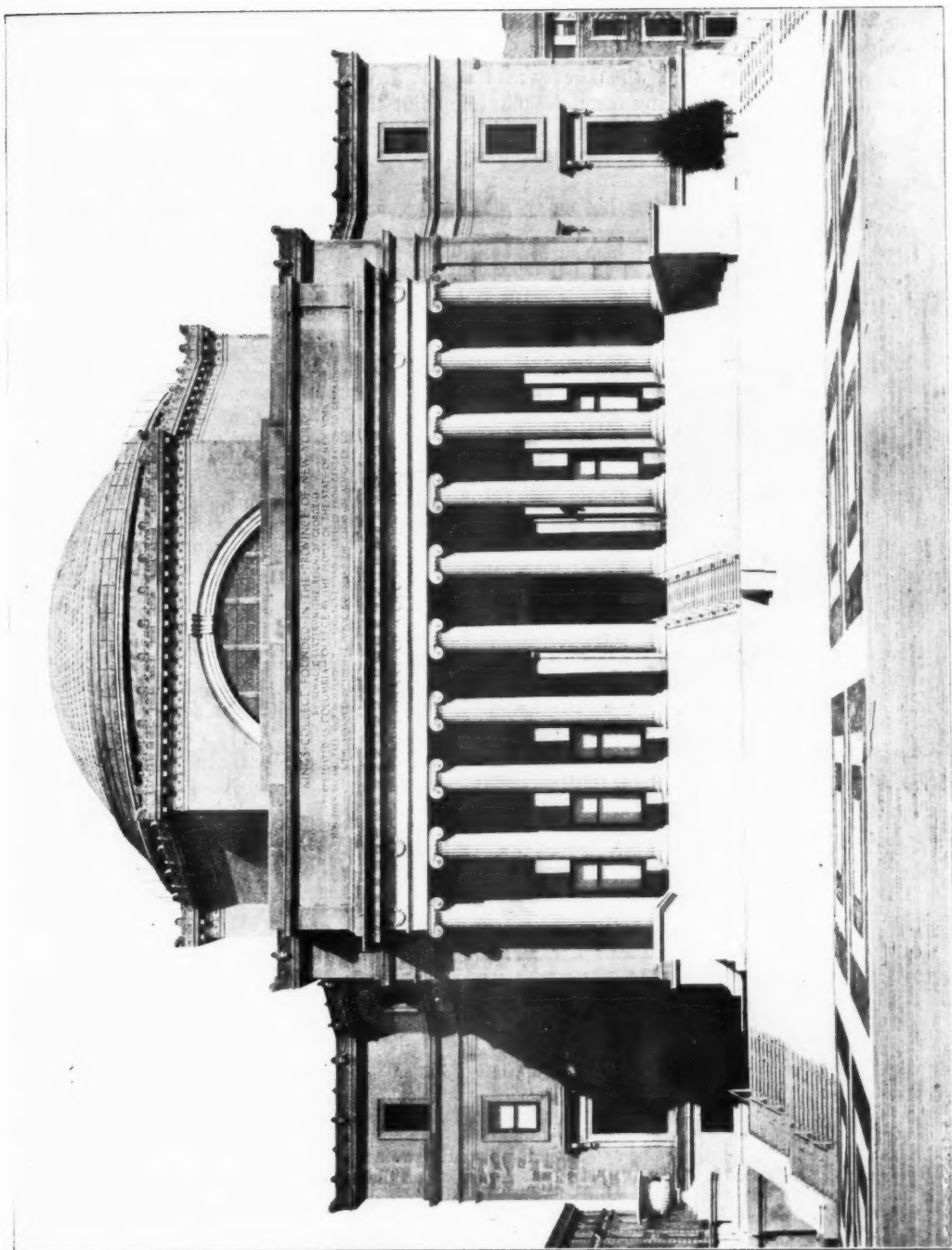


FIG. 19.—COLUMBIA UNIVERSITY LIBRARY, NEW YORK.
(Messrs. McKim, Mead & White, Architects.)

me give you the tip—we don't *know* it, but we *suspect* that they *vote* together. How do you stand as regards your leaders—or are you the leader yourself—or is your condition as ours was here a few years back, when every man was the sole leader of an army of one? Or are you in England suffering from the old complaint that used to be the rule here, in the days when the American Institute of Architects had only just come into existence, of not knowing who the leaders of your profession are until they are beyond the age when they desire active leadership?"

"How do you account for this new condition of things among the architects?" asks our guest by way of reply.

"Search me," says the Congressman—"How do you account for it?" turning to ourselves.

We reply: To several things; including, first, the system of education which enables America to know who their strong men are while they are still young—a system that is competitive and the results of the competitions made public. It is the French system—that of the *École des Beaux-Arts*—where each student knows exactly the standing and record of every other student as well as his own in every subject. The entrance examinations are to the schools—not to the Institute. Before a student has spent much time or money he knows whether it is likely to be worth his while to do so. Secondly, to fellowship which arises out of friendly association with one another in the architectural clubs, the universities, and the ateliers in Paris. To the influence upon a large personal following of young men by such strong men as Messrs. Charles McKim, John M. Carrère, George B. Post, Walter Cook, Cass Gilbert, and E. L. Masqueray; and of the college professors, Wm. R. Ware, A. D. F. Hamlin, D. Despradelles, Warren Powers Laird, Frederick M. Mann, Emil Lorch, Paul Cret, and others; but more particularly to the generous impulse of one of the present leaders who had a great opportunity to show his mettle and proved equal to the occasion. This was the man who might have designed in his own offices all the buildings at the Columbian Exposition, but chose rather to recommend to the Exhibition Company to give out five of the largest buildings to his ablest contemporaries in his own town of Chicago, and five others to men practising in different parts of the country, whose loyalty to these co-workers was never found wanting, and whose integrity and ability—artistic, organising, and executive—proved him to be the fittest to lead, though he conceded himself that leadership to Richard Morris Hunt during his lifetime—Mr. Daniel Hudson Burnham, of Chicago, Chairman of the Senate Commission, which recommended to the Senate that the plan of the great L'Enfant should be adhered to.

VOTE OF THANKS TO MR. SWALES.

Mr. ERNEST GEORGE, *President*, in the Chair.

MR. JOHN W. SIMPSON, *Vice-President*, said he had been asked to perform the pleasant task of moving a vote of thanks to their distinguished guest, Mr. Swales, for his very comprehensive and brilliant Paper. He wished some one with more personal knowledge of American work than he could boast of had been asked to fulfil the duty. Mr. Swales, as they all knew, was peculiarly qualified to read such a Paper. He was one of that brilliant staff of designers who were responsible for

the Louisiana Exhibition, was an old student of the *École des Beaux-Arts*, and a pupil of Pascal. With regard to the Paper, he did not think it fell within his province either to criticise or to discuss it. Mr. Swales had given them an admirable description of the work that was going on in the United States, and one could only appreciate the excellence of design which was being done by the leading men there. It was an old-fashioned principle in discussing a treatise or paper of any kind to endeavour

to draw some sort of moral from it. If he might venture to attempt such a task, the moral he would draw from Mr. Swales' Paper was the important influence that the French education of American artists had had upon their designs; the progress which had been made since the time that Hunt first came back with his criticism from France was marvellous, and the adaptability of the old Classic work to modern needs was exemplified in a most extraordinary way in American work. Here was a nation, pre-eminently a practical nation, dealing with vast commercial interests and building huge monuments, not as monuments, but as works for which they had practical necessity. They grafted the tradition and training and exact knowledge and delicate feeling for Classic beauty which they obtained from France upon their own gigantic needs, and produced such colossal works, such broad and magnificent designs as had been shown that evening. There was one point to which, even at that late hour, he should like to draw the attention of the President of the Institute—viz. that when the authorities in charge of the improvements at Washington found that the tremendous railway system of the Pennsylvania and the Baltimore and Ohio Railways ran into Washington right across the point where they wanted to run their great central avenue, they sent their architect, Mr. Burnham, to the railway companies to ask them to pull up their railway and shift it out of the way; and the most extraordinary thing of all was that the railway companies did move out of the way, and not only that, but they commissioned Mr. Burnham to build them the magnificent station they had just seen on the screen. He wondered if their own President could do anything about Charing Cross Railway Station on similar lines. If that and the bridge across Ludgate Hill could be moved Members would be most happy to see him entrusted with the commission to design a new Station on the other side of the river! In concluding, Mr. Simpson asked the Meeting to accord a very hearty vote of thanks to Mr. Swales for his charming and interesting Paper.

Mr. JOHN SLATER [F.] said he should like to second the vote of thanks for this most delightful Paper. He was sure it must have made them all green with envy to think that a young man could go over to America with a design for an enormous scheme for new Admiralty buildings and simply submit it to the authorities and have it at once

accepted. That was a state of things they should gladly like to see duplicated on this side.

THE PRESIDENT said it had been a great privilege to hear what Mr. Swales had been able to tell them, and they all thanked him most heartily. It was delightful to think of a city in which the people as well as the architects were willing to make sacrifices, and to pull down buildings to erect finer ones, or to make better ways through their city. He was afraid it would be long before they should see their way to do similar things in London.

Mr. SWALES, in responding, observed that Mr. Simpson's suggestion that their Chairman should go to the Charing Cross and Holborn people and induce them to move their railway station was an excellent idea. He would suggest, too, that Mr. Ernest George might do as Mr. Burnham did, scoop both jobs and make them into one. He was sure that that was what the public and the architects would like Mr. George to do, and was also confident that Mr. George would like to do it. Five per cent. commission on a four-million pound job was worth making an effort for, and perhaps he would take that into consideration. It might be possible to present other good schemes, such as Mr. Speaight had done. He had put forward an interesting plan to remodel the Horse Guards' Parade and St. James's Park, and he had submitted an estimate. He did not know how that estimate would work out, unless Mr. Speaight proposed to do as Mr. Walter had done—to ask for enough money, not to pull down a dome, but to cut down the trees at present on the site, and then to get another appropriation to do the rest of the work. These ideal schemes were very interesting, and if only one out of ten suggestions were to be adopted it was sufficient to make them worth striving after. It had often occurred to him that it was unfortunate that there was not some school in this country where such schemes could be devised and brought before the public—say at the Royal Academy. In the *École des Beaux-Arts* at Paris large monumental schemes were brought out in the programmes for the *Prix de Rome*, and especially in such competitions as for the *Chenavard* prize, for which each student made his own programme. That was a prize given to well advanced students, and it always brought out designs for some grand improvement of Paris or other city of France. That prize and the schemes resulting from it had greatly attracted Americans and had led to much of their interest in town planning.

PRESERVATION OF HOLYROOD CHAPEL.

A PARAGRAPH in the *Pall Mall Gazette*, referring to work now being carried out at Holyrood Chapel under the direction of H.M. Office of Works, having been brought to the attention of the Art Standing Committee, the Hon. Secretary of the Committee was instructed to communicate with Professor Baldwin Brown [H.A.], of Edinburgh, with a view to his making inquiries on the spot, and acquainting the Committee with the actual nature of the work in progress. As will be seen from his interesting and exhaustive description printed below, Professor Baldwin Brown has responded most generously, and the Committee at their last Meeting voted their cordial thanks to him for the time and trouble he had devoted to the inquiry and for the valuable report with which he had favoured them. As regards the preservation of Holyrood Chapel, the Committee are satisfied that the work of repair is being conducted with all the reverent care that could be desired for this venerable and historic structure. Mr. W. T. Oldrieve, F.S.A. [F.], Principal Architect for Scotland to H.M. Office of Works, under whose supervision the work is being carried out, has kindly supplied photographs from which the accompanying illustrations have been produced.

REPORT BY PROFESSOR BALDWIN BROWN ON THE WORK IN PROGRESS AT HOLYROOD.

As regards the first part of the quotation from the *Pall Mall*, there has been no controversy about Holyrood restoration for a year past, but certain persons have been repeating in fresh letters to the *Scotsman* the old arguments which have been long ago answered. No one here has attached any importance to these, and a week or two ago the *Scotsman* put its foot down on their authors in a good leader, and closed the correspondence. There never was the least real danger of "restoration" after the Trustees declined to act, but there was a good deal of talk and grumbling which will now die down.

It may be added that the situation has been somewhat changed within the last few days. The one argument which was urged with some show of reason for the restoration of Holyrood was based on the fact that the Knights of the Thistle had no Chapel of their Order, and that a restored Holyrood would offer the fitting accommodation which it is obvious the Order should possess. The *Scotsman* has now (March 12) intimated that the authorities of St. Giles' High Church have received a letter from Lord Knollys on behalf of His Majesty the King, as head of the Order of the Knights of the Thistle, and thus proceeds: "It was stated in the letter, we believe, that the Knights of the Thistle desired to have a Chapel or stalls of their own in

the capital of Scotland, that they had given up the idea of having such at Holyrood, and now wished to know if the authorities of St. Giles' would favour the idea of accommodating the Knights in the Cathedral. It is understood the communication has had its origin in the fact of Lord Leven and Melville generously placing at the disposal of His Majesty for this purpose his share of the £40,000 his father left for the restoration of Holyrood Chapel, which sum went back to the family estate on account of that project not being proceeded with. The sum in question amounts to £20,000 or £25,000." Further steps to be taken in this matter will be watched with interest.

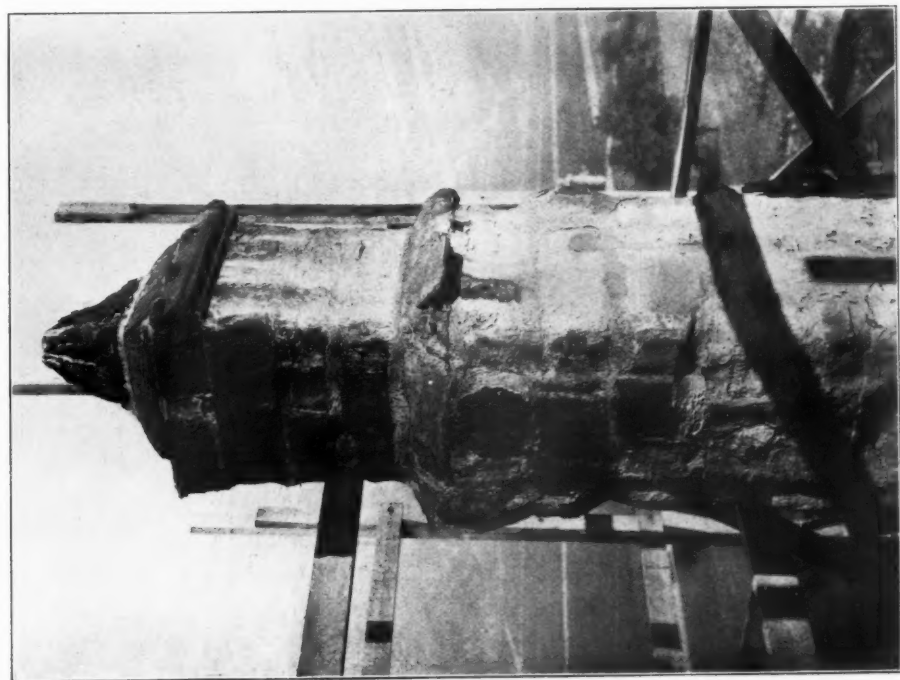
The following is what is being actually done:—

(1) The grouting-machine is being extensively used for the strengthening of the inside of the walls, which is in a very crumbly state in some parts. In the south wall of the south aisle the clerk of works told me that they pumped in at one place the best part of a ton of cement before it began to ooze out below.

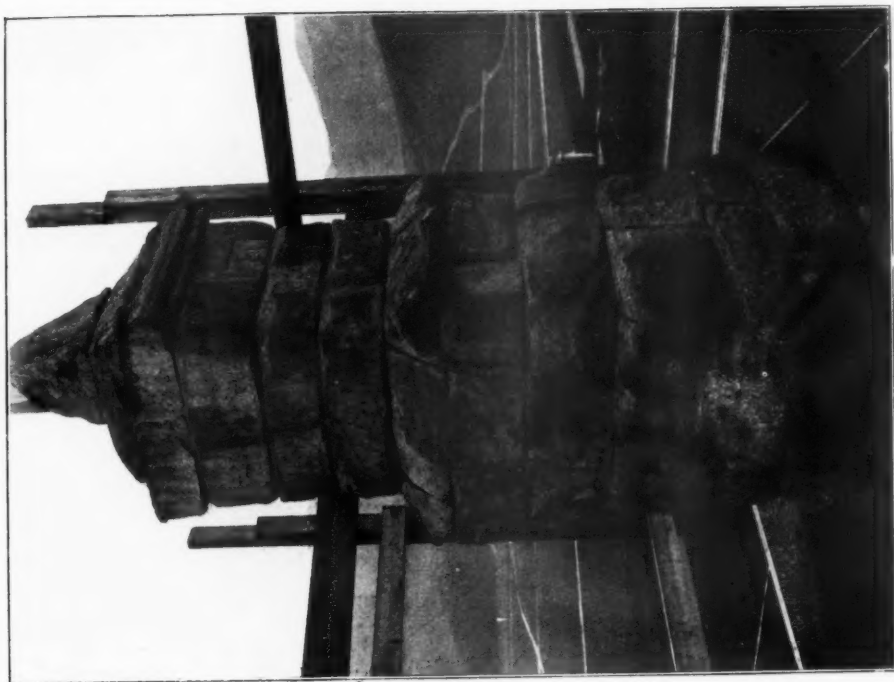
(2) The common slates (quite modern) which form the outer covering of the roof of the south aisle are going to be replaced by the stone slates so common in old times in Scotland, fragments of which have been found in the *débris* lying over the vaulting of the south aisle.

(3) The tops of the ruined walls, and of the flat-headed piers, from which the flying buttresses south of the south aisle start to abut against the south wall of the aisle at the triforium level, have been covered with asphalt, not visible from below.

(4) Treatment of the masonry generally. As is well known, a great amount of cement has been used in comparatively modern times at Holyrood to "make up" the stonework where this has decayed, and at the same time the joints were all "pointed" in such a way that the mortar was smeared over the faces of the stones in the neighbourhood of the joints. What is now being done is to remove all this mortar from places where it has been used to "make up" from the faces of the stones over which it has been smeared and from the joints; the aim being to expose everywhere the actual surface of the old stonework, even where it has been much worn, and to treat it with abundant spraying of baryta water as recommended by Professor Church. This spraying has been repeated ten to fifteen times, and has been successful in hardening the surface of the stonework. In the joints fresh mortar has been put in, but this is everywhere kept well back within the joint and below the surface of the stones. There is no attempt to bring the cement forward or to give it a decorative treatment. The result seems to me to be satisfactory. Of course there would be the obvious danger of scarring the surface of the old stones in the process of removing the mortar or cement, and I naturally looked carefully to see how far this had happened. Traces of such a thing are

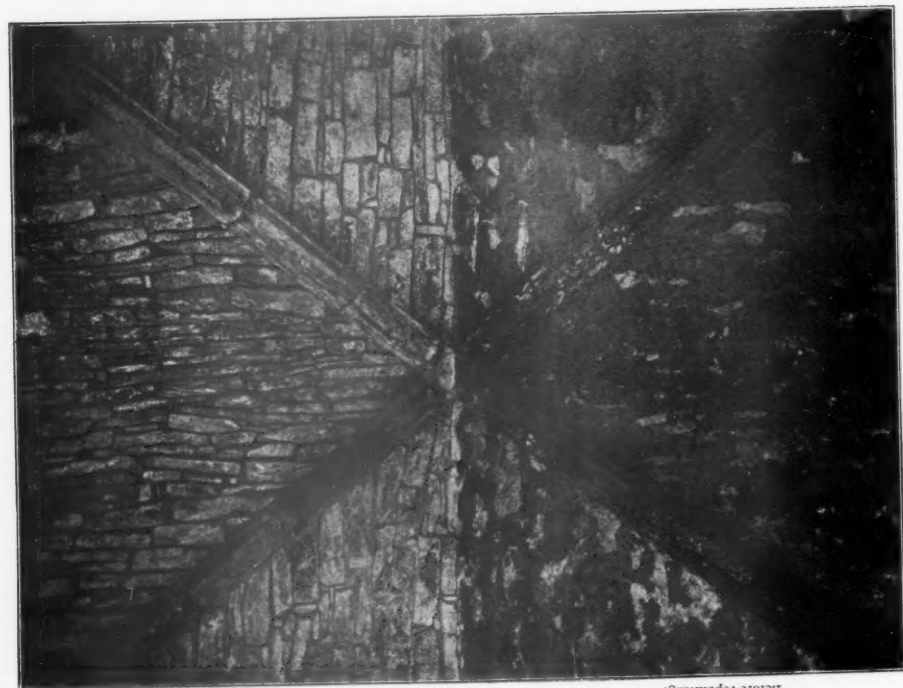


Before repointing (25 June 1908).



After repointing (14 December 1908).

FIG. 1.—HOLYROOD CHAPEL: PIER AND BASE OF DECAYED PINNACLES, AGAINST CLOISTERY WALL ON SOUTH SIDE OF NAVE.



After repointing.

Before repointing.

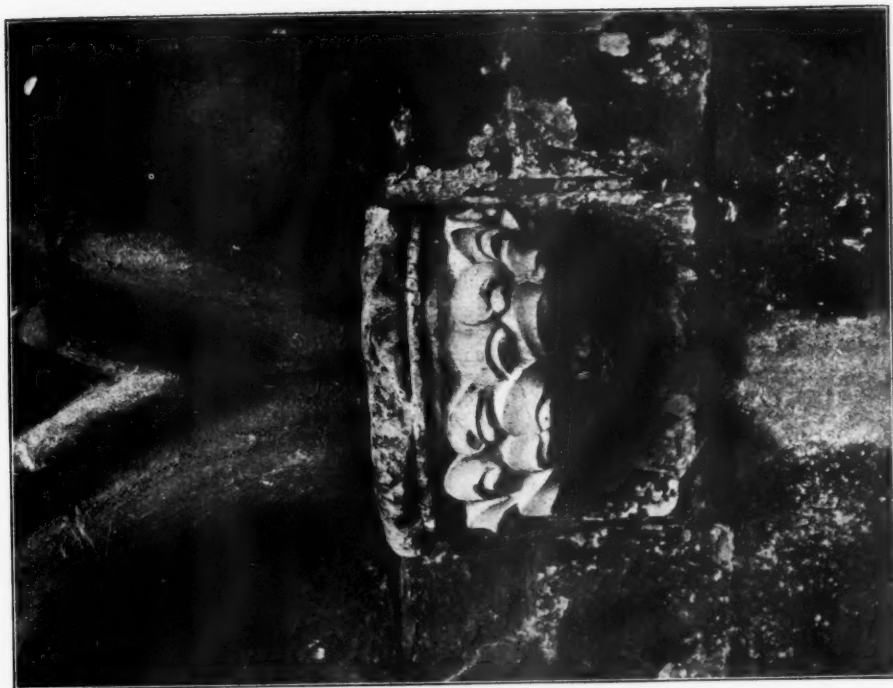
FIG. 2.—HOLYROOD CHAPEL: ONE BAY OF VAULTING OVER SOUTH AISLE: (15 FEBRUARY 1900).



FIG. 3.—HOLYROOD CHAPEL: A CAPITAL OF CLOISTER ARCADE. RIGHT-HAND SIDE BEFORE CLEANING; LEFT-HAND SIDE AFTER CLEANING (6 JANUARY 1900).



Before cleaning (30 November 1908).



After cleaning (3 December 1908).
The capital has the appearance of having been reworked, but all that has been done is to remove the softer surface of soot, &c. The stone is light-coloured, and must be particularly hard.—G.B.B.

FIG. 4.—HOLYROOD CHAPEL: CAPITAL FROM GLOSTER WALL ARCADE AT SOUTH SIDE OF SOUTH AISLE.

to be found, but they seemed to me to be exceptional accidents, I suppose hardly to be avoided, and there certainly is no trace of any attempt to work over the face of the old stonework. Any mark of the tool represents a mere slip. Naturally these slips are by no means to be ignored, and should be noticed by way of warning; but the blemishes are very slight indeed, while there is no question that the old stonework looks immeasurably better, and at the same time older than it did when messed over by this cement. The piers and pinnacles against the south clerestory wall of the nave, built in rather a soft greenish stone, now show nothing but the old weathered masonry, and are very pleasing to the eye. One of these is shown in fig. 1.

(5) The under-surface of the vaulting in the triforium, south of the nave, is also being freed from a coating of Roman cement which had been smeared irregularly over it, and the mortar is being picked out of the joints in the rubble. These joints are then being repointed, the mortar being kept well back from the face of the small stones of which the vaulting fields are constructed. This of course opens up the old question of how old rubble masonry should be treated. Such masonry, I should think, was in almost every case, especially in interiors, intended to be plastered, and I should be inclined to plaster these vaults, of which the stones are rough and small. This of course could be done at any time. The Roman cement of which I spoke was not a continuous plastering and had no value in itself. It was smeared on in parts [see fig. 2].

(6) The crucial matter is the treatment of the carved caps. There is a range of these in the cloister walk, along the south face of the south aisle wall in a decorative arcade. This carving is covered, and its interstices largely filled in, by a deposit that looks like soot, but is pretty hard, and is explained by the clerk of works as a mixture of soot with lime that has been washed out of the wall above. This deposit is being removed, and I confess I went to look at the work with considerable foreboding.

Everyone familiar with Holyrood will remember this black incrustation, which is something one does not remember easily elsewhere. It is far more than a patina, and really fills in and obscures the old carving and coats the plain surfaces with a skin of substantial thickness. If this could be removed with wooden tools it would be all right, but it is too hard for these (which have been tried) and the chisel and mallet have been employed. I examined carefully the three caps of this arcade in the cloister walk that have been dealt with, and I must say that in the case of two of them I could see no new tool marks on the stone, and the mason employed seemed to have done his work with very great care. In the case of the third, there were some of these incidental scars and scratches, though the same mason had been at work on it. The

stone in the building varies a good deal in character and hardness, and the clerk of works says this makes a difference in the ease or difficulty of getting off the incrustation. The masons to whom I spoke appear quite to recognise the aim they should have in view, and know that no tooling of the old surfaces, now brought freshly to view, is to be for a moment allowed. At the same time, the removal of this hard incrustation from carved work must in the nature of things involve a certain risk, and both Mr. Oldrieve and Mr. Robertson, the clerk of works at Holyrood, a very intelligent and careful gentleman, are alive to this. The character of the work may be judged from figs. 3 and 4. The photographs, by Mr. Frank C. Inglis, have been kindly lent by Mr. Oldrieve for purposes of illustration.

These caps, which are outside the building to the south and not in the part accessible to visitors, are boldly carved. There is much more delicate work on the caps in the arcade on the south side of the north wall of the north aisle, inside the building. These have not been touched, and we considered them with much searching of heart. The west front, again, presents another problem. It is, of course, by far the richest and most valuable part of the whole structure. It is very thickly incrustated with the sooty deposit, and the stone seems particularly soft and friable, for it comes away by itself in small bits, leaving white patches on the black. About this it has been decided to make no attempt at removing the crust, but to spray the whole of the masonry in its present condition with the baryta water, which Professor Church says will penetrate through the crust and consolidate the whole.

I have gone into these details, though at the cost of some prolixity, because it is just the details of the work that are of importance. In connection with the whole matter, I have newly read over the "Advice on Conservation of Ancient Monuments" in the R.I.B.A. *Kalendar*, current issue, p. 430. In one way the present work is more conservative than that contemplated in section 9, p. 432, of the "Advice," for no new stones are being put in, for reasons of appearance, to replace parts of mouldings, drips, &c., that have broken away, or, save for structural reasons, to replace the cement that has been so extensively used, especially in the interior, to make up defects. On the other hand, in getting off the incrustation, the directions on pp. 436 and 437 are not rigidly adhered to, as the tool is used, though, as I have explained, with very commendable care. Personally, I am quite satisfied with the treatment of the masonry in general, but am a little concerned about the carving, in regard to which Mr. Oldrieve is determined to proceed in a very cautious and tentative manner. I think they are quite right about the west front.

G. BALDWIN BROWN [H.A.].

REVIEWS.

THE EPHESIAN TEMPLES.

Excavations at Ephesus. The Archaic Artemisia. By David G. Hogarth. Atlas and text printed by order of the Trustees of the British Museum.

Restoration of the Cræsus (Sixth century B.C.) Structure, by Arthur E. Henderson, Architect to the British Excavations at Ephesus: Paper read at a General Meeting of the Institute 29th November 1906, and printed in the JOURNAL R.I.B.A. No. 3. Vol. XVI. Third Series.

During the last thirty years the progress made in the principles to be observed in archaeological research has been so great as virtually to create a new science, which, like others, demands the most serious study and can only be acquired by a long period of probation. In earlier days the explorer was content to follow the track only of the foundation-walls of a building, the traces of which had been lighted upon by cutting trenches, dumping on either side the earth dug out without much consideration for any further researches which might have to be made at a later period. Now, however, this haphazard method is changing and a more systematic research is employed, in which the whole site is mapped out first, and complete records are kept of the precise position of every wall, and of its relation to a standard datum level. These reflections have presented themselves to me when reading the minute descriptions given by Mr. Hogarth of the last excavations made on the site of the Ephesian temples, when great expense and loss of time were incurred in the removal of the vast mounds thrown up by Wood on important portions of the site which required further investigation. All this shows that in 1869 when he commenced his work, though full of energy and enterprise, Wood had never received the preliminary training which was absolutely necessary for a research involving so many difficulties as that of the examination of the site of the Ephesian temples. Wood succeeded in some points, such as the discovery of the real site and in the acquisition of the treasures now in the British Museum, but on his return in 1874, when he had already attempted to draw out the results of his first researches, he found that he had neglected to take note of many important details without which it was impossible to complete his survey. Again, a third time, he went out in 1883, but, in the nine years which had passed, the site had become so filled up with earth and overgrown with vegetation that he was unable to do more than bring away a few important fragments, and no record seems to have been preserved of this his last visit.

In the descriptive text which accompanies the folio volume of plates published by the British Museum, after referring to the early researches of Wood and then to those of the Austrian Archaeological Institute undertaken by Dr. Wilberg, the architect attached to the expedition, Mr. Hogarth proceeds to give in minute detail the result of the

last excavations of 1904-5, in the examination and measurements of which he had the able assistance of Mr. A. E. Henderson.

In the account given the operations have been distinguished into three divisions—(1) the clearance of the Cræsus platform, (2) the excavations beneath that platform, and (3) the explorations in the precinct.

Wood had come to the conclusion that the Cræsus temple was the earliest on the site, but Mr. Hogarth found that what had been considered to be the foundation of a great altar which formed the central feature of both the Cræsus and Hellenistic temples, belonged to more ancient structures, of which he traced three successive examples which are described as A, B, and C. The Cræsus temple thus becomes D, and the Hellenistic temple E. The evidence offered for the reconstruction of the plans of A, B, C, Mr. Hogarth says, is imperfect, and in some points obscure, but he gives evidence which shows that prior to the Cræsus temple there were three periods of construction, and the plan of the remains of each are shown on Plate II. From the various passages in which the temples are described in Classic authors Mr. Hogarth concludes that Temple A was a small tree shrine, which was built probably about 700 B.C. B, the second temple erected round and over A by the architect Theodorus of Samos, about 650 B.C. C, the third temple, was built by Chersiphon about 600 B.C., and completed by his son Metagenes. It was of the Ionic order, being the first erected in that style in Asia. The prolongation of the cella wall in the front and rear, as seen by the foundations on Plate II., shows that it was amphiprostyle with two columns-in-antis. It measured 54 feet wide, being about double that figure in length, so that it was a temple of considerable size, and was apparently built in masonry of such great dimensions that, according to Vitruvius, Bk. X., Chap. 6, a special contrivance was invented by Chersiphon to bring the stones from the quarries to the temple, situated about four and a half miles' distance, and also to raise them to their position in the temple.

The builders of the fourth, the Cræsus Temple D, according to Mr. Hogarth, were Demetrius and Poconius, of Ephesus, who have hitherto been credited with the erection of the Hellenistic temple which he says was built by Deinocrates. But as the Cræsus temple was built in 356 B.C. (the date of the birth of Alexander the Great), and the new temple was commenced at once, all Asia contributing to it, it is scarcely possible that Deinocrates could have been the architect, as he was not called in by Alexander till some twenty-four or twenty-five years later, by which time the Hellenistic temple was probably completed, with the exception of the carving of the columns. Deinocrates may have completed the enclosures of the temple, and in consequence have been credited with the design of the temple itself, an error which is sometimes

committed at the present day. At all events, it seems evident that the discovery of the remains of the Temple C upsets the attribution of the Cræsus temple to Chersiphon given by Vitruvius, whose description, however, Mr. Hogarth points out, resembles more the Hellenistic temple.

About half the text is devoted to the description of the various finds, such as the coins, jewellery, other treasures, and the pottery, the latter treated by Mr. Cecil Smith. In many cases the approximate dates ascribed to the earlier temples have been derived from the objects found and their position in the foundations.

The latter part of the text contains the description of the Cræsus temple, of which the greater portion was included in the Paper read by Mr. Henderson at a meeting of the Institute in 1906, to which reference is made later on. This is followed by a detailed account of all the architectural details of the Cræsus structure and of the sculpture by Mr. Hamilton Smith, and the text volume terminates with a series of fifty-two plates from photographs of the treasures found on the site.

The description given of the excavations is accompanied by a number of illustrations in the text, which are chiefly interesting as proofs of the immense difficulties Mr. Hogarth and Mr. Henderson had to surmount in order to arrive at the conclusions shown on the remarkable plan and the other illustrations published in the "Atlas."

Coming now to Mr. Henderson's conjectured restoration of the Cræsus temple, I am at a loss to understand why he should have based it on Pliny's description of the Hellenic temple with 127 columns, because the subsequent statement "given by various kings" shows that Pliny was referring to the temple built after the destruction of the old temple by Herostratus in 356 B.C. (see page 7 of Mr. Hogarth's description in the British Museum publication). All Asia then contributed to its restoration, and most of the columns were given by various kings, whereas, according to Herodotus, most of the columns of Temple D were given by Cræsus, and no other donor is mentioned. In providing the 127 columns Mr. Henderson includes those of the cella, the first time, I think, that such adjuncts have ever been added to the calculation.

With extreme ingenuity Mr. Henderson has managed to evolve an angle capital notwithstanding the great projection of the volutes on either side, but I am still of opinion that there was no column at the angle but a square pier with responds towards the column at the side and the rim—responds which were copies in stone of the balks of timber employed in early times to support the end of the architrave when the walls were either in crude brick or rubble masonry with clay mortar, as in the temple of Juno at Olympia. The projection of the respond equalled that of the abacus, and the plan of the pier was L-shaped. In elevation the respond

would consist of a narrow pilaster strip of slight projection, similar to those of the Erechtheum at Athens, and the whole pier was crowned with mouldings as in the same building but without the necking.

The principal characteristic of the entablature of the Asiatic Juno temples is the great height and projection given to the dentil course when compared with those in Greece. The dentil course in these Asiatic temples is the reproduction in stone of the square wood joists which carried or formed the ceiling over the peristyle. By its omission in his restoration Mr. Henderson has not provided the independent ceiling over the peristyle which existed in every Greek temple, and moreover has no adequate support for the cima gutter which in the archaic temple was of considerable size. We now come to the peculiar break in his pediment cornice, which no Greek artist could have perpetrated. Mr. Henderson bases this restoration, I believe, on one given in Koldewey and Puchstein to Temple C at Selinus, but at all events Hittorff managed to restore that temple without any such break, and so did M. Hulot in the magnificent drawings exhibited last year in the Royal Water-Colour Society's galleries. Mr. Henderson's reason for this restoration is not very clear; he calls the cymatium gutter the parapet, and states, p. 94: "If this parapet were continued, raking up the pediment, it would have been extremely unsightly from the rear, and, moreover, would have had no reason for its existence. I have therefore made it return at the angles for a short distance until the roof behind rises to its level." In the first place, as restored it is much more unsightly in the main front, and it would have been much better if Mr. Henderson had commenced by fitting his roof to the raking pediment and raised its level about 18 inches. By doing this he would have avoided the unsightly break of the cornice of the main pediment, he would have obtained sufficient depth for the construction of his roof, which he certainly has not got in his section, where it comes almost to a feather edge, and, what is also of the greatest importance, he would have raised the rear portion of his gutter so as to lessen the chance of the water flowing into the roof in the event of a stoppage of some of the lion-headed gargoyles. As shown in his section, a sudden thaw after such a fall of snow as we had a week or two ago would have flooded his roof.

On p. 98 Mr. Henderson speaks of the tiles of the archaic temple as found in the pockets of the foundations of the Hellenistic temple as evidently suited to a low-pitched roof. That description can scarcely be applied to his restoration, where the rise is 18 or 19 degrees in the British Museum publication, and 20 degrees in the frontispiece to his Paper, a rise much more Roman than Greek in its pitch, where the rise in early temples is only 15 degrees. He refers only to terra-cotta fragments of tiles, whereas those shown on Plate XI. of the

British Museum folio are much more like marble tiles, and I have always been under the impression that the roof of the archaic temple consisted of marble tiles, being about the earliest examples of those which were invented by Byzes about 550 B.C.

Whilst regretting that I am unable to agree with Mr. Henderson in his conjectural restoration of the Croesus temple, I feel that we are under great obligations to him for the assiduity and perseverance he displayed in the measuring of the various temples on the site, and for the pains he took and the labour he expended in the delineation of the plans and sections, where the precise position on plan and the relative height of every stone is clearly shown, and which are now of inestimable value as probably the last which will ever be made.

R. PHENÉ SPIERS [F.].

GREEK ARCHITECTURE.

Greek Buildings represented by Fragments in the British Museum. By W. R. Lethaby. 80. Lond. 1908. Price 10s. 6d. net. [B. T. Batsford, 94 High Holborn, W.C.]

Artists possessing both the analytical and constructive faculties have always been rare. They have generally been content for their critics to read them in their art creations. Possibly we should have been poorer had Wren or Turner bequeathed literary works. We are the more thankful therefore to Professor Lethaby, whose artistic power and draughtsmanship, accuracy and originality of thought, as well as his building experience, are so well known, for such a work as we have before us. Too often, moreover, literary artists are narrow in their range of sympathies: it is the more refreshing, then, to find the author of "Westminster Abbey" issuing a work on "Greek Buildings."

Grecian architecture records one of the rare high tides of human artistic attainment, and is as necessary to an architect's education as Grecian literature is to the poet and philosopher. But we live in an age of science. As history must stand the test of confirmation or rejection by ascertainable fact, so also the theories as to the actual form of ancient monuments must be brought to the searchlight of archaeological exhumation.

Professor Lethaby reminds us in his preface that in the British Museum we possess the original lithic records of nearly all the greatest Greek buildings. "Certainly" he says, "in no other place than a few Greek sites is there so much material available for such study as in London, and the buildings dealt with include the best-known monuments of Greek art . . . Of these the Temple of Diana and the Mausoleum can only be studied in the Museum, which contains practically all the wrought stones of them which have ever been discovered."

The author ends his work with a remark we prefer to make a preface. "My study," he says, "of the old has had for its object the discovery of the conditions of the new." His book is not merely a dis-

criminating review of the best that has been written on these renowned monuments, but is a work which every student of architecture, whether professional or lay, will rise from reading with a clearer grasp of Greek architecture, a greater admiration of Greek architects, and a sincere gratitude to the author. That such a work was urgently needed by students we, who have had laboriously to thread the labyrinth of museum marbles unaided, can feelingly testify, and we heartily congratulate students on this further guide to knowledge. A week devoted to the British Museum in studying Greek buildings as described within these pages would be well spent. Professor Lethaby's own beautiful sketches of the sculptures add that delightful interest which architectural works generally lack, and there are ample further plates from the best available sources, all admirably chosen to illumine the text.

The first three chapters are devoted to Diana's Temple at Ephesus, the Tomb of Mausolus, and the Parthenon and its Sculptures; and the last section to "Other Works." A good index is added. Much space is devoted to the latest or great Ephesian temple, and this appears to have been written before the result of Mr. Hogarth's investigations of the site were published in the British Museum book on the *Excavations at Ephesus*. Particularly interesting to the practical architect is the fact here emphasised that intentional variation of parts, particularly in the older Greek buildings, is almost as marked as in mediæval work. After a careful consideration of various theories, Professor Lethaby gives his reasons for considering Adler's beautiful restoration of the tomb of Mausolus the nearest to the truth, and he reproduces a fine view of it.

The Parthenon naturally claims a large share of space. The author sums up much that is most immediately useful and interesting in Penrose's great work and other authorities, and a most fascinating chapter it is to the mason as well as to the architect, the sculptor, and the decorator. We advise the R.I.B.A. examinees to read, mark, learn, and inwardly digest this chapter. The hypæthral heresy is dismissed with a quotation from Wilkins that "no provision was made, or contemplated, for the admission of light otherwise than by the door or by artificial light." The refinements in design and constructive irregularities observable everywhere are described and the reasons given.

Professor Lethaby gives us glimpses of the political economy of art under Pericles, who, in answer to the public objection as to the cost of such monuments, says that superfluous wealth was best expended on work which would be the eternal glory of the city. During their execution every art would be exercised and every hand employed. Neither labourers, mechanics, nor common people would be supported in idleness. The interesting fact is recorded that it was customary in Greece to appoint a commission or board for carrying on public works, and that architects were members of such boards.

As regards the use of colour and bronze ornament, the author says that "Not only the reliefs but the great sculptures were finished with colour and additions of gilt bronze The general tradition, down to the Renaissance, was to colour all sculptures." Professor Lethaby's beautifully illustrated description of the sculptures of the Parthenon forms one of the most delightful passages of the book. Fragments of the main pediment are restored by sketches until we seem to have an intelligent view of it as it issued from the sculptor's hands.

The old question as to how Phidias could possibly have executed some 50 pedimental figures, 92 metopes, and 521 feet of frieze is answered by the remark that Phidias was master of a school. "A few words, a few sketches, and the great traditional technique would soon settle all but a dozen or so of the metopes; but in all essentials the design is his own."

In an appendix on the method of setting out the volute, Professor Lethaby suggests that the Greek plan was to draw four intersecting lines on the eye of the volute, then to sketch on it a rough spiral according to the number of revolutions required, and centres for the successive arcs of circles were formed at the intersection of the small and rude spiral with the eight radii.

The appendix on "Architects and Antiquity" goes more into detail on the training and function of the architect, stating that the more ancient and the great classical architects were primarily sculptors. Later on in Greece they were engineers. In spite of their artistic and literary culture Aristotle would not allow that architecture was a fine art; it was too much subject to mere need to come within his definition.

In his closing sentences, the author says:

"It is a commonplace that the arch and vault were not recognised in Greek 'architecture.' Yet these menial coverings of drains and stores were to become the master forces of a new architecture."

"It is the same whatever 'features' we examine. That which is now 'aesthetic architecture' was once organic building. How long do past and cast-off needs remain in consciousness as taste? The normal course of architectural development has been through need, local possibilities, experiment—that is the period of infancy; to custom, mastery, expansion, and maturity: into rules, and then intentional variations, redundancy, æstheticism, incoherence, and decline."

"While Greek 'sanctioned architecture,' the ideal of Vitruvius, was declining, the Roman building art arose. Later architecture was again and again renewed in Byzantine, Romanesque, and mediæval *building adventure*, as in modern days it is being renewed outside the realm of 'taste' by fresh needs and engineering experiment—the basis of the architecture of to-morrow."

W. H. SETH-SMITH [E.L.]

THE ARCHITECTURE OF EARLY CISTERCIAN BUILDINGS.

An Architectural Description of Kirkstall Abbey: by W. H. St. John Hope, M.A., and John Bilson, F.S.A. Thoresby Society, Leeds, 1907; being Vol. XVI. of their publications.

The appearance of this volume will be welcomed by all serious students of ecclesiology. Issued in an unpretentious form by the Thoresby Society (of Leeds), its contents, both in form and substance, will be found to furnish a contribution of singular value and importance to our national records of architectural history. Within its covers are two separate essays, one by Mr. St. John Hope, dealing with the plan, structure, and architectural scheme of Kirkstall Abbey; the other by Mr. John Bilson, treating of the building as an example of the general Cistercian system of plan and arrangement, and reviewing its features, point by point, in comparison with other typical specimens of the early buildings of this Order, both in England and in Burgundy, whence the Cistercian system originated.

This union of antiquary and architect is not only valuable for the result here achieved; it is also significant of greater possibilities for the future of the sister sciences, and certainly furnishes an object-lesson of the value of the mutual assistance to be derived from the mingling of the two activities. Archaeology is the lamp of history, and its beams illumine obscure problems in the architectural relics of a great past. Similarly, in the light of a perfected knowledge of architectural detail, facts of profound significance emerge from the twilight of antiquity. The time has passed when we could regard any school of architecture as being self-originated, and it is no longer possible that we should remain content with a limited outlook which would study different schools without co-ordinating them and determining the streams of influence which have united to produce them. The fine lines of organic form are built upon a skeleton whose type is the product of a long evolution. Even so the peculiar features of the schools of architecture which are the subject of this work are largely the outcome of constructive methods, gradually evolved and specialised.

Kirkstall Abbey is a sombre, and to the ordinary eye a somewhat forbidding, pile, its architecture characterised by a grim simplicity, almost harsh in its denial of the elegancies of detail met with in other works of the period. Its situation within the smoky purlieus of Leeds adds to the sombreness of the effect. But, viewed through the glasses of the ecclesiologist, it is a pearl of price, for it offers an unspoilt and wonderfully complete example of a typical Cistercian church of early date, retaining those features of plan and arrangement which have had so marked an influence upon the determination of types of church building in this country as well as in North-West Europe.

The origins of our English Cistercian types are

well shown in Mr. Bilson's masterly Paper. The period of critical interest in our mediæval architecture is the end of the twelfth century—that which by common consent our writers term the "transitional" period. England and Normandy, from the time of the Conquest, were architecturally one province, well advanced in a special mode of design. The ribbed vault, used in England in the last decade of the eleventh century, was followed by the introduction of the pointed arch, but the former was really of Anglo-Norman origin, and was developed here at a date earlier than the rise of the Burgundian system of ribbed vaulting which the Cistercians, who have been spoken of as "the missionaries of French art into Germany," introduced into that country and into Italy.

Structurally, Mr. Bilson says, the chief contribution of the Cistercians to English architecture was the introduction of the systematic use of the pointed arch. Before their advent it was only an occasional feature, the best known example being that of the transverse ribs of the nave vault of Durham (1128-1133).

The vaults of the presbytery and nave aisles at Kirkstall are still standing, and are among the very earliest examples in England of the *complete* solution of the Gothic problem of vaulting. The interesting question arises: What precise influences brought about this development? Was it borrowed from the Cistercians of Burgundy, or from the Ile-de-France, whose marvellous advance in architecture had already commenced before Kirkstall was begun? The Kirkstall vaults have cells of plastered rubble, like the earlier vaults, and are in contrast to the coursed masonry of those in the Ile-de-France, whilst the profiles of the rib-moulds are Anglo-Norman. It is probable therefore that they were a product of the native school, modified by the Cistercian use of the pointed arch.

The detail and general expression of this building are Anglo-Norman without the richness of ornament characterising the Romanesque. This is repressed by the Cistercian severity of rule. But the constructive development is essentially Gothic. Nowhere in England had the Cistercian reform a greater measure of success than in Yorkshire. Its influence permeated architecture with that simplicity and restraint which was the essential spirit of Cistercian building. To this influence is due the purity of design which characterises the eastern parts of Fountains, Rievaulx, and Beverley.

Mr. Bilson includes a monograph of great value on the plans of Cistercian churches, and shows the strictly practical nature of every feature. A sanctuary for the High Altar, a quire for the monks, another to the westward for the *conversi* or lay brethren (who, in this Order, were the social equals of the priest-monks), and a sufficient number of chapels for all the priests to celebrate Mass—these and minor requirements determined the plan of a Cistercian church.

A large chart of comparative plans is included at the end of the volume (fig. 96), in which the character of typical examples in England and France is contrasted, and the differences discovered are entered into at some length in the text. The development of plan and architecture in the houses of this Order down to the end of the thirteenth century is traced in a most interesting manner, the examples given showing that the first uniformity of plan, so strikingly expressive of unity of observance inculcated by the founders of the Order, gave way ultimately to a conformity with the architectural standards of the time.

For Mr. Hope's contribution we have equal commendation. It is a complete, lucid, and methodical description of the Abbey, from which, with the aid of the numerous photographs and measured drawings with which this book abounds, the experienced reader may readily construct for himself a solid mental image of the Abbey church and monastic building. This section also presents a concise history of the foundation of the house; and in the course of the description of the structure of the church, the uses of the various parts are fully explained, with reference to the Cistercian rules. As an example of the value of these descriptions we may instance that of the arrangement of the quire. By a minute and painstaking study of the fragments yet existing in the piers and floor of the nave, coupled with collateral indications furnished by the enlargement of windows at a certain place in the aisle walls, and the evidence of ancient documents, Mr. Hope is able to show that the real nature of the early Cistercian quire-enclosure was a much more complex thing than has been hitherto supposed.

In the first two bays of the nave was the quire of the monks, and at its western extremity the stone screen or pulpitum, about twelve feet west of which was the rood screen, the bay thus enclosed forming a retro-quire (retrochorus) for infirm monks or those who had recently been bled. Westward again of this enclosure was a platform with altars against the rood screen, and the four remaining bays of the nave formed the quire of the lay brothers.

The whole volume is copiously illustrated with measured drawings and photographs. The former are peculiarly valuable, and we note with satisfaction that an excellent series of general elevations and sections have been reproduced in reduced form from Sharpe's *Parallels of Gothic Architecture*. The photographs may serve their purpose as diagrams, but technically they are not good, being, with few exceptions, very inferior as specimens of half-tone work, and printed on a paper quite unsuitable for the purpose. Some (as figs. 27 and 28) are so blurred as to be almost valueless. Is there no variety of paper to be found which will unite a quality sufficiently absorbent to give a brilliant half-tone picture, with the toughness or

elasticity of fibre needful to ensure permanence? The problem presses for solution. Here apparently the choice has been made in favour of durability, but at the expense of quality. The plates are ruined by their mealy and mottled texture and the lack of force and value in the shadows, in which, too, no detail is usually visible. This is the more to be regretted in view of the value of the text as a permanent contribution to our archaeological records.

There is a large general plan of the church and monastic buildings supplied with the volume. This shows, in lithographed colours, all the different dates of the work. It is one of the best we have seen.

FREDK. BLIGH BOND [F.].

PORTLAND CEMENT.

The Everyday Uses of Portland Cement. Authors and publishers, The Associated Portland Cement Manuf. Ltd. 1909. 80s., 156 pp., 2s. 6d. net.

Although no book upon the merits of a material published by manufacturers of such material can be entirely free from a certain element of trade advertisement, this volume contains a great deal of valuable information presented in a palatable form.

At the present time when concrete buildings are coming so much under public notice it is particularly desirable that the uses and methods of employing cement should be summarized, and that all those responsible for the supervision of this material should be kept in touch with the new possibilities which it presents in construction.

A short introductory chapter concludes with a warning against the use of natural and of imported cements. All natural cements are inferior to those of artificial origin; they usually contain a considerable excess of alumina and iron, and hence their rapidity of setting has to be reduced by undue additions of gypsum. The statements here made are, however, somewhat sweeping; many excellent natural cements are in use in America, where they largely take the place of the better hydraulic limes used in this country. Again, all foreign cements are not bad, and the circulation of reputable foreign brand marks by some independent authority such as the Board of Trade or the Chamber of Commerce, would be of great benefit to users. It is undoubtedly true that much cement is imported under very misleading descriptions beneath the shelter of such unfortunate names as "Natural Portland," and if this has not been done, it would seem to be worth the while of reputable makers to get up a test case and procure a legal definition of Portland Cement.

The introductory chapter is followed by a useful ten-page description of aggregates. The quality of an aggregate is quite as important as the cement which binds it, and as much is yet to be learnt upon this subject the collected information here given will prove valuable.

Pages 20-39 deal with the proportion and mixing of concrete materials, and include some data in tabular form as to quantities for different purposes and in relation to the determination of voids. In large works the importance of preliminary investigations on suitable proportions can hardly be overestimated, and it undoubtedly often happens that much cement is wasted through insufficient care in grading.

For the execution of work in frosty weather the addition of 1 per cent. of salt to the water used for gauging, for each degree F. below the freezing point, is recommended. Salt, like other electrolytes, acts as an accelerator in the setting of cements, and the amounts which might be added under this recommendation would, at times, be very considerable. Salt, moreover, as a commercial substance, contains magnesium chloride which is deliquescent. These facts, which are not referred to, seem to merit some consideration. The theory that setting is due to crystallisation seems to be tacitly adopted by all writers in this country, but other views, which it would be out of place to attempt to discuss here, are held, and until some consensus of opinion is forthcoming, it is impossible to predict the ultimate effect of frost and the stage at which it should render special measures or cessation of work necessary. In the carrying out of contracts vital matters might well turn upon this important question.

After the above discussions six pages of general data are followed by a chapter on workmanship, wherein the construction of false work and the use of different tools are set forth. The succeeding chapter (p. 69-86) deals with Reinforced Concrete, and these pages are to be particularly commended since they contain a concise account of general principles without reference to special systems. Some useful and simple data for calculating the dimensions for posts and beams are here given, and these the architect who is excluded by temporal or mathematical limitations from the study of special treatises, should find of service.

Finally, the various possible uses of cement are described in two profusely illustrated chapters, uses which cover a range from drinking troughs to concrete barges and imitation trees. Among these new marvels the writer must confess to having sighed for an ordinary gravel path after picturing his progress up the flight of steps illustrated in fig. 75.

Neatly bound in buckram and paper boards and well printed on good paper, the book is certainly one to be recommended both for its style and contents.

ALAN E. MUNBY [A.].



9 CONDUIT STREET, LONDON, W., 20th March 1909.

CHRONICLE.

Architecture and Material Problems.

Mr. Swales's Paper on American Architecture and his interesting commentary on the numerous illustrations thrown on the screen occupied the whole of the evening meeting on Monday, and left no time for the usual discussion. The Paper, as in the case of Mr. Lanchester's on Town Planning, attracted notice in the daily press, and an excellent summary of it was given in Tuesday's *Times*. The Paper suggested also the admirable article headed "Architecture and Material Problems," which appeared in *The Times* of Thursday. It is rare to find outside the professional press such enlightened views on the subject of architecture as are given expression to by *The Times* writer, and as the article will doubtless influence the views of the public, it will be of interest to members to reprint it in their own JOURNAL. After a complimentary remark on Mr. Swales's Paper the article proceeds:—

Mr. Swales is of opinion that the prospects of the art in America are very promising, and he is not alone in that view. Most English visitors to the United States are struck by the originality and even beauty of many of the newer buildings there and by the interest which is taken by the general public in architecture. In that respect American architects have a great advantage over English. We are apt to think that we have done our duty by the art when we have grumbled a little at any new building large and prominent enough to alter the appearance of a London street. We do not consider the difficulty of the material problems with which the modern architect has to contend; nor are we ready, either individually or as a nation, to make those sacrifices which must be made if architecture is to be more of an art than engineering. We do not understand that there cannot be cheap architecture, that a building only becomes architecture through a superfluity of energy which, having solved its material problem, proceeds to express some idea through that solution. Mr. Swales said that architecture had been defined as the mirror of a people's needs, aspirations, and enlightenment. We are content for the most part if our buildings express our needs. We will not spend enough money on them to make them expressive of our aspirations.

This may seem to be a poor way of putting the matter. But it is certain that no architect, whatever his genius, can produce a fine building if he is only allowed just so much labour and material as will enable him to solve his material problem, if he is forced to use the cheapest of everything. The ugliness of many of our modern buildings is the result not of any want of talent in the architects, but of parsimony in their employer, and when the employer demands a great show at a little expense the result is a vulgarity for which he alone is responsible. There appears to be less of this parsimony in the States than in England. Architects have more opportunities there, and they are learning to make use of them.

Yet in England also there is a real revival in architecture and a real desire for buildings that shall express something more than our material needs. But this revival will end in nothing unless our desire for beautiful buildings becomes strong enough to make us ready to pay for them. We are too apt to think that art of all kinds is produced only by artists. There is no art that does not depend to some extent upon public encouragement; but architecture depends upon it most of all. It costs little to write and publish an epic, but it costs a great deal to make a fine building, and that cost must be borne not by the artist, but by his employers. Never, probably, in the world's history was there so much building as there is now; but most of it cannot be architecture because of the conditions imposed upon the architects. Architecture, of course, must always solve its material problems. It has that in common with engineering; but engineering is not architecture even when it is tricked out with borrowed architectural ornaments. Too much of our modern architecture is merely ornamental engineering; and often, as in the case of the Tower Bridge, we cannot but wish it had been left plain, for the incongruous ornament only hides the power and, as it were, the unconscious beauty of the engineering. Ornament in architecture is a means of expression, and it is irrelevant if the building to which it is applied expresses nothing in its structure and is only a solution of a material problem.

We may be sure, therefore, that we shall never develop a great architecture through the solution of purely material problems. We may build shops or hotels of Babylonian immensity with every modern convenience; but, however richly they may be ornamented, they will remain merely decorated pieces of engineering. The great architecture of the world has solved material problems, but its main purpose has not been to solve them. In Greek temples and Gothic cathedrals the material problem was subordinate to the purpose of expressing great emotions and ideas. A noble style is developed in the expression of these emotions and ideas, and it communicates some of its beauty even to the humbler buildings of utility that are influenced by it. But beauty, whether of structure or of ornament, does not originate in them, but in buildings whose main purpose is expression, just as beauty of language is developed in poetry and eloquent prose, not in the prose of mere utility. We cannot, therefore, expect a new and beautiful style of architecture to be developed in buildings of pure utility, however lavishly they may be decorated. They may get some beauty from the borrowed ornaments of past architecture; but that beauty must be irrelevant to their main purpose, since, if it

expresses anything, it will express something that has nothing to do with that purpose. This may sound discouraging; but we do not intend discouragement. Least of all do we mean to imply that architects should give up the effort to make buildings of pure utility beautiful with ornament or by any means in their power. We believe that the instinct of architectural expression is reviving among us, and that it must be strengthened by all possible means of exercise and training. Architects must do what they can with things as they are, if they are to prepare their art for a great future. But that future will only come when we learn to express our nobler emotions and ideas in buildings, as we express them in other forms of art. Great architecture is rare, because communities have not often the generosity and faith and common feeling necessary to the expression of great things through communal effort. A Gothic cathedral expressed the faith, not of one man, but of a whole people. The question is whether we, as a community, have some great common idea or emotion which we can learn to express in some great form of building. If we have, we shall in time produce a great architecture. If we have not, we shall fail to do so, and shall prove ourselves finally to be inferior, in some of the essentials of civilisation, to the Greeks and to our own medieval ancestors.

The Nave of Westminster.

At a meeting of the British Academy, held last Wednesday, the Dean of Westminster, Fellow of the Academy, communicated a Paper, written by the Rev. R. B. Rackham, on "The Building of the Nave of Westminster."

The Paper was based on investigations of the Westminster Fabric Rolls, and stated that the nave of Westminster was one hundred and fifty years in building. The money for it came from certain of the revenues of the monastery which were assigned to the *novum opus*, and were administered by a warden who was responsible for the building. These revenues came from Longdon in Worcestershire, some houses in King Street and Tothill Street, Westminster, from the manors of Hyde and Paddington, and later, from lands in Westbourne and Kensington. But further help was needed, and it is historically interesting to trace the share in the work taken by kings and abbots. Its origin was due to Cardinal Simon Langham, who had been abbot of Westminster; and, fortified by his pecuniary help, Nicholas Litlington laid the first stone of the new nave on March 3, 1376. Richard II. helped the work in the last ten years of his reign, when the marble pillars were set up. Under Henry IV. the work ceased altogether. Henry V. atoned for this by making himself responsible for it. He gave 1,000 marks a year, and one of his commissioners was the famous Dick Whittington. In this reign the triforium was completed, the side aisles roofed, and the clerestory walls well advanced. Unfortunately Henry V. died after nine years, and Henry VI. did nothing for the Abbey.

The work languished until 1467, when Abbot George Norwych was deposed by a revolution in

the convent, and the next year Thomas Millyng took up the work with renewed vigour. He roofed one bay, and his work was carried on to its completion by the abbots who succeeded him, and who appointed themselves wardens. Millyng became abbot in 1469, and when Edward IV.'s Queen fled to Westminster to take sanctuary in 1470, Millyng received her hospitably, and stood godfather to the young prince, Edward V., who was born in his house. Consequently, after Edward IV.'s return he with the Queen and Prince gave gifts to the work, amounting in all to £580; and soon after Millyng was made Bishop of Hereford (1474). John Esteney, who had been warden since 1471, succeeded him as abbot, and in his long wardenship of twenty-six years he roofed the nave, vaulted five bays of the nave and the side aisles, and finished the great west window. In fact, Esteney practically completed the fabric, and of all the builders (except perhaps Henry V.) most deserves our gratitude.

His successor, George Fasset (1498-1500), gave £600 to the work, which was finished by the last great abbot, John Islip (1500-1532). He finished off what Esteney had left undone in the vaulting and at the western gable end. Then he glazed the windows in 1507-10, paved the floor (1510-17), and put up some stone screens under the towers which have now disappeared. We may date the completion of the work in 1528. Islip enjoyed the confidence of Henry VII., who had done nothing for the abbey in Esteney's time, but after Islip had become abbot began to build the great Lady Chapel which bears his name, and the abbot put Henry's badges upon his new vaulting. Islip also rebuilt the chancel of St. Margaret's, and he was at work upon the western towers when he died in 1532. His death was practically the end both of the new work and of the convent itself. The last fabric roll dates from 1533-34, and almost the last piece of work was the preparation of the church and sanctuary for the coronation of Queen Anne Boleyn on Whit Sunday 1533.

Exhibition of Christian Art, Düsseldorf, 1909.

By direction of the Council is printed below for the information of members the prospectus of the Exhibition of Christian Art to be held at Düsseldorf this year, under the patronage of his Imperial and Royal Highness the Crown Prince of the German Empire and of Prussia:—

REGULATIONS FOR ADMITTANCE.

Object of the Exhibition.

§ 1. The Exhibition of Christian Art comprises:

1. A retrospective department;
2. An exhibition of contemporary works of an ecclesiastical and Christian character;
3. A department of ecclesiastical architecture
4. A department for reproductions.

Place and Time.

§ 2. The Exhibition will take place at the municipal Fine Art Palace in the Kaiser Wilhelm Park from 15th May till 3rd October 1909, inclusive.

Organisers and Managers.

§ 3. The Exhibition is organised by the "Committee of the Exhibition of Christian Art, Düsseldorf 1909, a registered society," and managed by the Fine Art Committee undersigned.

Admittance.

§ 4. Works of a Christian character in the spheres of painting, sculpture, metal engraving, architecture, in the arts of drawing and reproduction as well as of applied art, when these latter show in invention and execution the stamp of an original work of art, are admitted for exhibition. All works will be submitted to examination before reception.

A special agreement must be entered into with the Fine Art Committee as to the exhibition of cartoons and paintings on glass.

The name of the manufacturer who carries out the work may be mentioned, with works of applied art, beside that of the artist who designs it.

Anonymous works and copies are not admitted.

Paintings, drawings, &c., are to be sent in framed.

Every artist may exhibit not more than three works of every description; cyclical representations are taken as one work.

The works both of German and of foreign artists are admitted, but those of the latter only after arrangement with the Fine Art Committee.

Reception and Arrangement.

§ 5. The works of art sent in are submitted in Düsseldorf to a jury selected by the Fine Art Committee, and are hung or put up by a special Commission, so far as the selection of works is not effected by confidential representatives appointed by the Fine Art Committee in other places, or associations of artists have not been conceded the right of collective exhibition with their own juries and hanging committees. Should any confidential representative not undertake the arranging and hanging, or should any association not send a delegate for those purposes, then such works when sent in shall also be put up by the arranging and hanging commission of the Fine Art Committee.

No objections to the decisions of the confidential representatives will be entertained.

Besides the quality of the work of art, the question of the space at disposal is also decisive for the reception jury.

Exhibition Room and Accommodation.

§ 6. The entire plan and construction of the interior buildings in the municipal Fine Art Palace, as well as the allotment of the space, are made by the Fine Art Committee. The Committee will make all the rooms uniformly available for the purposes required. Large architectural interiors or annexes are to be erected at the cost of the exhibitor, after agreement with the Fine Art Committee. The pedestals required for putting up works of art are supplied by the Committee; any others than those so supplied can only be employed at the expense of the exhibitor after agreement with the Committee.

Application and Sending in.

§ 7. Forms of application respecting works selected by a confidential representative are to be sent in to him; on the other hand, the applications of artists exhibiting collectively, to whom their own jury and hanging commission has been conceded, are to be sent in to the directors of the artists' association concerned. All applications from other artists are to be sent in direct to the "Geschäftsstelle der Ausstellung für christliche Kunst, Düsseldorf, 1909."

The applications are to be sent in two duplicate copies, adequately filled up with applicant's statements, by 10th March 1909, and the works of art themselves during the period between 22nd March and 10th April 1909.

§ 8. It is indispensable for all works of exhibition that

the slips delivered together with the forms of application should be filled up in exact accordance with the instructions on the slips themselves and fastened on to the work of art. The printed form of address also given with the form of application is to be accurately filled up and attached to the lid of the case.

Insurance and Liability.

§ 9. The Fine Art Committee insures the works of art sent in for exhibition against damage by fire from the moment of arrival in the municipal Fine Art Palace until the moment of leaving the same.

The insurance value of a work of art exhibited may not exceed its selling price.

No liability is accepted for damage or loss of any other description.

Packing.

§ 10. Works of art despatched from other places are to be packed singly, each one by itself, in strong cases, in the closing of which only screws may be employed.

With works under glass, which are to be suitably packed in wood-wool according to their size, cloth is to be employed for fixing over the glass during transport on account of its being easier to detach.

Transmission.

§ 11. Persons sending in works have not to bear the cost of transport themselves; the Fine Art Committee, moreover, undertakes the cost of returning works exhibited and remaining unsold to the senders at the place of original despatch.

To entitle them to free return it is indispensable that the works when first dispatched be marked "Ausstellungsgut" (Articles for Exhibition) and be shipped or forwarded separately on a bill of lading or freight-note alone and not with any other goods, as the original bills of lading or freight-notes are required as vouchers for the free return. After the close of the Exhibition the Fine Art Committee will expedite the return of the goods to the best of its ability, but cannot be made responsible for their despatch within any particular time.

Works of art of unusual weight and dimensions can only be sent in after previous arrangement with the Fine Art Committee.

No reimbursement is made for charges following the goods, for cases, packing, insurance, or other expenses.

Any insurance during the transmission is a matter for the exhibitor.

§ 12. The unpacking and repacking of the works of art are done in the presence of the officials appointed by the Fine Art Committee for the purpose, who will draw up a report as to any damage that may occur to the articles, such report to be binding on the exhibitor.

Catalogue.

§ 13. An illustrated catalogue of the works of art will appear; for this purpose it is desirable to forward reproductions of the works sent in for exhibition. No responsibility, however, can be accepted to keep in view and to return all such copies sent in.

Drawings and photographs intended for the illustrated catalogue are to be sent in to the Exhibition Office by the 15th April 1909.

With the application for exhibition of the work of art in question, the artist confers also the permission to reproduce it for the catalogue—but only for that purpose. Should this reproduction be objected to, an express declaration to that effect is necessary.

In case of discrepancies between the particulars given in the form of application and those sent in with the work itself, the contents of the form of application are to be decisive. No sort of responsibility is taken for errors or omissions in the catalogue.

Distinctions.

§ 14. It is proposed to award distinctions for pre-eminent performances.

Such distinctions will be awarded by a prize jury, the composition of which will be afterwards determined upon. The members of the prize jury are excluded from the competition.

Sale.

§ 15. Sales can only be concluded through the business department of the Exhibition.

A fee of 10 % will be deducted from the selling price on all sales effected; in the case of objects of applied art 20 % will be deducted.

The same fees will be charged upon all orders and repeat orders negotiated through the Exhibition Office. Should works for sale be declared as no longer for sale during the existence of the Exhibition, the exhibitor has then to pay the selling fees at the Office. The regulation respecting the selling fees of 10 or 20 % is applicable to all objects of art marked for sale and in the Fine Art Palace from the period of their delivery there.

After the completion of the catalogue the prices fixed cannot be raised.

Copying.

§ 16. It is not permitted to make any sort of copy of objects in the Exhibition.

General Regulations.

§ 17. No work of art may be withdrawn before the close of the Exhibition.

§ 18. The Fine Art Committee accepts no responsibility for any works of art which have not been fetched away at latest three weeks after the close of the Exhibition and as to which no arrangements have been made up till that time.

§ 19. Any complaints or appeals, of whatever nature they may be, must be handed in to the Fine Art Committee at latest two months after the close of the Exhibition.

§ 20. The Fine Art Committee reserves to itself the right of allowing departures from the foregoing regulations in special cases.

§ 21. By the act of sending in to the Exhibition, the exhibitor signifies his agreement with the whole of the foregoing rules and regulations.

§ 22. All communications are to be addressed to the office of the

"Ausstellung für christliche Kunst, Düsseldorf, 1909."

The Committee of the Exhibition is constituted as follows:—

Chairman: Professor Dr. H. Board.

Deputy Chairman: Count Alfred von Brühl, Artist.

Adams, Councillor of Provincial Administration; Dr. Becker, K. C. Town Councillor; Paul Beumers, Court Jeweller; Josef Beyerunge, Solicitor; Professor Dr. Bone; Rev. R. Burekhardt; Professor Clemens Buscher, Sculptor; Professor Dr. Paul Clemen, Bonn University, Provincial Curator of the Rhine Province; Dr. Deneken, Director of Kaiser Wilhelm Museum at Crefeld; Wilhelm Döringer, Artist; Bruno Erich, Artist; Rev. Heinrich Esser; Louis Feldmann, Artist; Dr. Friedrich, Bank Manager; Professor Ed. von Gebhardt, Royal Academy of Fine Art; William Götschenberg; Rev. Johannes Hinsenkamp, Ronsdorf; Professor Jos. Kleesattel, Architect; Professor Heinrich Lauenstein, Royal Fine Art Academy; A. Ludorff, Royal and Provincial Surveyor; Count Paul von Merveldt, Artist; Professor Claus Meyer, Royal Academy of Fine Art; Royal Surveyor Meyer, Soest; Carl Moritz, Government Architect (retired); Professor Geo. Oeder; Wilhelm Pfeiffer, Banker and Councillor of Commerce; C. Rudolf Poensgen, Chairman of Chamber of Commerce; Wilhelm Pütz, K. C. Notary; Dr. Edmund Renard, Registrar of Rhenish monumental records, Bonn; Rev. Emile Rose; Ernest Schiess, Privy Councillor of Commerce; Dr. Max Schmid, Professor at the Technical High School, Aix-la-Chapelle; Dr.

Schweitzer, Director of the Town Museum, Aix-la-Chapelle; A. Stehle, Editor; Carl Strauven, Judge of District Court (retired); Max Trinkaus, Banker; R. Westphal, Editor-in-Chief; Director G. Wiedemeyer, Town Councillor.

The New Post Office Buildings and Reinforced Concrete.

In the House of Commons on 10th March Mr. H. C. Lea asked the First Commissioner of Works whether he was aware that in the new Post Office buildings in the City of London being built in ferro-concrete by Messrs. Holloway Brothers only one coat of Portland cement facing was being applied, and whether he was satisfied that this was sufficient to finish the exterior rough surfaces of the ferro-concrete, especially in running mouldings, as it was not recognised by architects and the plastering trade, two coats always having been considered the minimum. He also inquired if one coat was in the specification of the architect to the new Post Office buildings.—Mr. Lewis Harcourt replied that the work was being done in accordance with specification, and was considered by his architects to be the most satisfactory treatment on concrete.—Mr. Lea asked if Mr. Harcourt was aware that owing to the way this work was done it was impossible to get satisfactory results, and men were being "sacked" by Messrs. Holloway Brothers wholesale.—Mr. Harcourt replied that this was contrary to his information. He had previously received deputations on the matter, and would now be pleased to receive any information given him in writing.

The Action of Sea-water on Cement.

In the Newcastle section of the Society of Chemical Industry a paper was recently read by Mr. Charles J. Potter on "Chemical Changes in Portland Cement Concrete and the Action of Sea-water thereon." The author was led to investigate the reasons for the changes effected in some concrete by the action of sea-water, and he ascertained, as other experimenters have done, that the injury was due to the magnesium salts found in the water. By means of practical tests he discovered that the magnesium sulphate was the most active cause of the trouble—the feebly combined lime and alumina in the cement become decomposed, forming calcium sulphate and alumina compounds, which on taking up water on crystallisation effect the bursting of the concrete. To counteract this action, after trial of various materials, it was found that burnt red brick clay ground with the cement when mixing gave the best results. A series of tests made of ten parts of cement and six parts of red calcined clay were given in the form of graphic diagrams. In these the beneficial influence of the brick clay was very marked, and is said to be due to the fact that the percentage of lime is lowered by the clay admixture. Another set of experiments indicate the hardening action of carbon dioxide on cement concrete, and it is shown that the effect of

the carbonic acid is to replace the water and to bring about a high degree of induration. These latter tests arose out of some observations on the floor of a malt-kiln.

Reinforced Concrete.

The March number of *Concrete and Constructional Engineering*, the first of a new volume, fully sustains the reputation this journal has won for itself. The new buildings of the Selfridge Stores in Oxford Street, which claim to embody the latest ideas of a composite structure comprising steel framing and reinforced concrete, are described, and some of the principal constructional drawings are given. Mr. C. F. Marsh summarises in a form for comparison with the rules of other countries the latest regulations and recommendations for the use of reinforced concrete in buildings issued by the Prussian Ministry of Public Works. Photographs and plans, with some descriptive notes, are given of a reinforced concrete cathedral recently erected in Poti, Russia. The concreting of the foundations of this building was started 6th July 1906, and the concreting of the large cupola, including the cross, was finished 22nd May 1907. Other articles are "Testing Laboratories for Concrete and Cement," by Cecil H. Desch, D.Sc.; "Concrete Aggregates," by Dr. John S. Owens; "A Reinforced Concrete Cement Storage Building at New Jersey, U.S.A.," where the method was adopted of casting the members separately on the site, and erecting them after setting. The number includes the papers and discussions at the Concrete Institute.

Earthquake-proof Buildings.

An international competition has been arranged by the Lombard Co-operative Society of Public Works, under the auspices of the College of Engineers and Architects of Milan, to determine types and methods of building to be adopted in those parts of Italy which are subject to earthquakes. Plans, reports, photographs, and models will be received by March 31, and awards of £120, £80, and £40 are offered for the best proposals. The secretary's address is 8 Via Lupetta, Milan.

The late Alfred Normand [Hon. Corr. M. Paris].

M. Alfred Normand, the distinguished French architect, and former President of the Central Society of French Architects, who died at Paris on the 2nd inst., had been an Hon. Corresponding Member R.I.B.A. since 1884. He was architect to the French Government, and held the appointment of Inspector-General of the *Services pénitentiaires* to the Ministry of the Interior. Born at Paris in 1822, Alfred Normand entered the *École des Beaux-Arts* in 1839 as pupil of his father Henri-Marie Normand, and afterwards of M. Jay. In 1846 he carried off the Grand Prix de Rome with his design for a Museum of Natural History. His principal *envoi* from the Villa Médicis was a Study of the Roman Forum with a Restoration; this work was

exhibited at the Paris Exhibition of 1855, where it won for its author a medal of honour. On his return to Paris he was appointed to the *sous-inspection* of several public buildings. From 1855 to 1857 he was engaged in the completion of the famous Pompeian house, in the Avenue Montaigne, built for Prince Jérôme Napoleon, but since demolished. He re-erected the Vendôme Column, which had been destroyed during the Commune, and restored the Arc de Triomphe. Other notable buildings of his are the Central Prison at Rennes and the Hospital of Saint-Germain-en-Laye. In 1890 he succeeded M. Diet at the Académie des Beaux-Arts. M. Normand was Member of the Institute of France, and "Officier" of the Legion of Honour. He leaves two sons, architects: M. Charles Normand, architect to the Government; and M. Paul Normand, Second Prix de Rome.

Memorial to Julien Guadet.

A committee has been formed in Paris to arrange for the erection of a monument to the memory of the late M. Julien Guadet, Professor at the *École des Beaux-Arts*, and author of the monumental work *Éléments et Théorie de l'Architecture*. The committee is presided over by M. Ch. Girault, President of the Central Society of French Architects, and has as Vice-Presidents MM. L. Bonnier, President of the Society of Architects *diplômés* by the Government, and Fr. Blondel, President of the Provincial Association of French Architects. The monument is to be erected in the interior of the *École Nationale des Beaux-Arts*. In order to secure a monument worthy of the great figure it is to commemorate, and of the building in which it is to be placed, the committee are appealing for subscriptions specially to M. Guadet's old pupils and *confrères*. The hope is also expressed that others who are able to appreciate his rare talents and high character will seize the occasion to testify their admiration for the late master. The committee of patronage include representatives of America and most of the countries of Europe, Mr. John Belcher, R.A., representing Great Britain. The Treasurer of the Committee is M. L. George, 109 Boulevard Beaumarchais, Paris.

The Annual Dinner 1909.

The annual dinner of the Institute will be held this year on Wednesday, the 26th May, at the Whitehall Rooms, Hôtel Métropole. The Council are very desirous that this festival should be the occasion of a large and brilliant gathering, and they hope to see a full attendance of members. The price of tickets is 21s. for members and their guests, this charge being inclusive. It would be a convenience if members would give the names of their guests when applying for tickets. All applications for tickets, with cheques, should be addressed to the Secretary. If members would kindly give the Secretary intimation before the 1st May as to the friends near whom they desire to sit, every endeavour will

be made, when arranging the table plan, to meet their wishes as far as possible.

The International Building Trades Exhibition.

This Exhibition opens at Olympia on Saturday the 17th April and closes the 1st May. Mr. H. Greville Montgomery, M.P., the organiser of the Exhibition, writes that he will be pleased to send free tickets of admission to members of the Institute who care to apply to him for them.

ARCHITECTS' BENEVOLENT SOCIETY.

Annual Report adopted at the Annual General Meeting 9th March.

The Council in submitting the Fifty-ninth Annual Report have to record a year in which the demands made upon the Society have been exceptionally great. Ninety-nine applications for assistance were received, and, in addition to the annuities allowed to eleven pensioners, relief was afforded in eighty-eight cases. The income would not have been equal to dealing adequately with so many claims had not the Royal Institute of British Architects increased its annual contribution to £100, a sum further augmented at the end of the year by £25. The total amount thus distributed in grants and pensions was £1166. 15s. 7d.

Notwithstanding that the year has not been generally prosperous for architects, and that in consequence many subscriptions have been withdrawn or deferred, the Council have the satisfaction to report that there has been no diminution in this source of income, which amounted to £783. 10s. Owing, however, to the urgency of the applications, the Statement of Accounts shows an excess of expenditure of £74. 18s. 10d., which will be reduced by the £25 granted by the Institute but not received at the close of the financial year.

With regard to the Capital Account, the amount invested has been increased by the purchase of £150 New Zealand 3 per cent. Inscribed Stock. The total amount received in donations was £141. 11s. 3d. Among the chief contributors were Mrs. Arthur Cates £50, Mr. John T. Christopher £22. 15s., Mr. Ernest George £21, and Mr. Arnold Mitchell £10. 10s.

The thanks of the Society are due to the T-Square Club, which contributed £6. 3s. 9d., being the proceeds of a concert, organised by Mr. W. J. H. Leverton, in aid of the Society.

The President of the Society of Architects (Mr. G. E. Bond) has increased the amount of his annual subscription to £5. 5s., and Mr. A. B. Plummer, Past President of the Northern Architectural Association, to £5. Mr. Plummer also issued a special letter of appeal to the members of the Northern Association on behalf of the Society. The Manchester Society of Architects have also sought to promote our objects by making a special appeal in their *Annual Kalendar*, as well as publishing a

list of their members who are also contributors to the Society. With regard to the Societies allied to the Royal Institute the following are on the list of subscribers: The Bristol Society of Architects £3. 3s., the Devon and Exeter Architectural Society £3. 3s., and the Royal Institute of the Architects of Ireland £3. 3s., while the Societies of Manchester, Nottingham, Wolverhampton, and York have at different times contributed donations.

In view of the small number of subscribers—520—as compared with the number of practising architects, the Council would urge on all those interested in the welfare of their poorer brethren, or those dependent on them, the importance of exercising their personal influence in obtaining additional subscriptions.

The Council have with great regret to record the deaths of Mr. W. M. Fawcett, Mr. L. H. Isaacs, Mr. G. R. Crickmay, Mr. G. A. Mansfield, Mr. E. W. Mountford, Mr. C. F. Reeks, Mr. R. F. Vallance.

The following being the five senior members retire by rotation from the Council: Mr. Walter Emden, Mr. Reginald St. A. Roumieu, Mr. H. Chatfeild Clarke, Mr. A. Saxon Snell, and Sir Henry Tanner. To fill the vacancies caused by these retirements the Council have the pleasure to nominate Mr. Arthur Ashbridge, Mr. Charles J. Blomfield, Mr. John Borrowman, Mr. C. R. Baker King, and Sir Charles Nicholson, Bart. The Council have also the pleasure to nominate Mr. Leonard Stokes, Mr. T. M. Rickman, and Mr. William Glover as Vice-Presidents.

The thanks of the Society are due to the Proprietors of *The Builder* and *The Architect* for granting space for free advertisements in their valuable journals.

The Council also wish to record their indebtedness to the Royal Institute of British Architects both for generous contributions and office accommodation, and to the Staff for their always helpful courtesy in any matter connected with the Society.

MINUTES. X.

At the Tenth General Meeting (Ordinary) of the Session 1908-09, held Monday, 15th March 1909, at 8 p.m.—Present: Mr. Ernest George, *President*, in the Chair; 31 Fellows (including 15 members of the Council), 37 Associates (including 1 member of the Council), 1 Hon. Associate, and several visitors—the Minutes of the Meeting held Monday, 1st March [p. 324], were taken as read and signed as correct.

The decease was announced of Nicolas Alfred Normand, Member of the Institute of France, *Hon. Corresponding Member*, Paris, elected 1884.

The following Associates attending for the first time since their election were formally admitted by the President—viz., James Everett Bownass, Harold French, Walter Puckering Rylatt, Richard John Tyndall.

Mr. Francis S. Swales having read and illustrated a Paper on AMERICAN ARCHITECTURE, WITH ESPECIAL REFERENCE TO WORK AT WASHINGTON, a vote of thanks was passed to him by acclamation.

The Meeting separated at 10.15 p.m.

